

MILK MARKETING BOARD

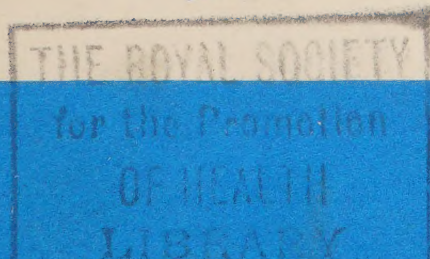


THE NATIONAL
DAIRY HERD

INTERIM CENSUS

1960

UEA/1961



PRODUCTION DIVISION
JAMES DITTON • SURREY

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THE NATIONAL DAIRY HERD OF ENGLAND AND WALES

Results of a census carried
out by the Milk Marketing
Board in June 1960

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DEFINITIONS

1. **The National Dairy Herd** is composed of cows and heifers in milk, together with cows-in-calf but not in milk; used for dairying in herds selling milk through the Milk Marketing Board. (It is pointed out that milk selling herds include not only animals used for dairying but also a small number used for rearing calves for beef). Source—*Milk Marketing Board*.
2. **The National Herd** in England and Wales includes cows and heifers defined in paragraph 1 together with the cows and heifers similarly defined in herds not selling milk through the Milk Marketing Board. Source—*Ministry of Agriculture, Fisheries and Food*.

PREFACE

In 1955 the Milk Marketing Board conducted their first census of dairy herds to obtain information on the breed of cows. The results were published in a booklet—The National Dairy Herd 1955 Census—which has received wide circulation and has been in great demand. It was felt at that time that a census every ten years or so would keep pace with the changes in the structure of dairy herds. We discovered, however, from other sources of information in the Production Division—mainly received from our A.I. service—that changes in breed and in size of herd were going on much faster than we had supposed from experience. It was decided, therefore, to conduct an interim census in 1960 based on a sample of milk selling herds.

The first results, which were submitted to the Board in December, 1960, disclosed that great changes had indeed occurred and the full story which was made available in the summer 1961 amply bore out this first impression, so that we have been encouraged to publish these results for circulation among those interested in our industry. They reveal that in terms of breed, 80 per cent of our milk selling herds are now made up of cattle of the specialised dairy breeds compared with 60 per cent only 5 years ago. In this same short period the size of our individual herds increased at three times the pace of the previous 20 years. Other features of the census are reported on in this booklet for the first time and altogether there is, we think, a clear picture of the dairy industry as it was on the threshold of the sixties.

Our thanks are due to the 12,868 milk producers who co-operated in this study and to F. B. Leech and M. P. Vessey, of the Department of Statistics, Rothamsted Experimental Station, for their help in the selection of the sample and the analysis work.

*Production Division,
Milk Marketing Board,
December, 1961.*

THE 1960 CENSUS—AN EXPLANATORY NOTE

In 1955 the Milk Marketing Board's new contract with all milk producers provided a useful medium for obtaining statistical information on all milk selling herds. No such convenient and comprehensive arrangement was available in 1960 and it was, therefore, decided to base the Census on a sample of milk producers.

The first step was to select the sample. This was based on all milk producers who sold milk to the Board in October, 1959. The 2,000 producer-retailers who sold no milk on wholesale contract were excluded for the sake of simplicity; there was no reason to suppose that they differed radically from the remaining 120,000 producers selling to the Board.

A 12 per cent sample (to allow for wastage and to ensure a net 10 per cent sample) representative of both geographical and size distribution was taken using mechanical sampling devices. Four size groups were used—(a) herds of less than 10 cows, (b) herds of between 10–20 cows, (c) herds of 20 and under 40 cows and (d) herds of 40 cows and over and the county was used as the basic geographical area. Where the sample in a county contained less than 60 herds on account of the small size of the county it was amalgamated with the adjacent county or counties. The 120,000 milk selling herds were, therefore, sampled in 184 strata to cover all sizes of herds and all areas of the country.

The 15,397 selected producers were sent a questionnaire, a copy of which is reproduced below:

SPECIMEN COMPLETED FORM

METHOD OF MATING If you have more than one Farm this relates to all of them and there is no need to give particulars of your breeding policy for each. Please delete items not applicable (a) A.I. ONLY Breed(s) of bull(s) used (b) OWN BULL(S) ONLY Breed(s) of bull(s) used (c) A.I. and OWN BULL(S) Breed(s) of bulls used A.I. <u>FRI, HER</u> Own Bull(s) <u>FRI</u> (d) NO BULL USED Buying in Females		FARM 1 <u>A. Farmer, Esq.,</u> <u>Home Farm,</u> <u>MILKTOWN,</u> <u>Wessex.</u> Total acreage of crops and grass <u>110</u> acres (exclude rough grazing)						FARM 2 County of Farm 2 <u>WESSEX</u> Total acreage of crops and grass <u>78</u> acres (exclude rough grazing)					
		THE DAIRY HERD AND REPLACEMENTS Number of females of each Breed or Breed Type.						THE DAIRY HERD AND REPLACEMENTS Number of females of each Breed or Breed Type.					
		Breed or Breed Type					TOTAL	Breed or Breed Type					TOTAL
		FRI	FRI (G)	SHO				FRI	FRI (G)				
(a) Cows and heifers in milk and cows in calf but not in milk		16	2	7			25	9	5				14
(b) Heifers in calf with 1st calf		4	1	1			6	3	—				3
(c) Females 1 year and under 2		8	2	—			10	4	1				5
FOR M.M.B. USE ONLY													
Disposal of calves for beef Please put tick <input checked="" type="checkbox"/> in square or squares where applicable		Calves sold within 2 months for rearing for beef <input checked="" type="checkbox"/>		Calves reared to yearling stage for beef <input type="checkbox"/>		Calves reared to slaughtering stage for beef <input type="checkbox"/>		Calves sold within 2 months for rearing for beef <input type="checkbox"/>		Calves reared to yearling stage for beef <input checked="" type="checkbox"/>		Calves reared to slaughtering stage for beef <input type="checkbox"/>	
		Number of cows kept for rearing beef calves = <u>1</u>						Number of cows kept for rearing beef calves = <u>NIL</u>					

The following notes with the form were sent to each milk producer taking part in the census.

1. If you farm more than one holding please give figures for EACH holding. If you have more than two holdings, please attach the information for the additional farms on a separate piece of paper. It is important to show the county in which each holding is located.
2. In the main part of the schedule headed 'THE DAIRY HERD' include all animals whose purpose is to produce milk (and calves for the dairy herd).
3. Please head the breed columns with the first three letters of each of the dairy breeds on your holding—e.g. AYR for Ayrshire, or the first letter of each word if more than one word—e.g. R.P. for Red Poll.
4. Where it is difficult to determine the breed and where the breed is unknown, enter the breed that the animal most resembles, adding the letter (X) beneath to indicate cross breeding—e.g. FRI
(X).
5. At the bottom of the form, we are anxious to obtain information on the beef side of dairying. Please show by a tick (or ticks) which is your normal method of disposal of calves for beef, and then enter the number of females (of all breeds) whose main use is, or will be, to suckle or pail-feed calves for beef.
6. The information given by you should be as it is on the day when you fill in this form.

The questionnaire was circulated in the last week of May, 1960, and producers were asked to complete it as soon as convenient. The response was very good:—

REGIONAL DISTRIBUTION OF THE SAMPLE

Region	Number of	
	Questionnaires sent out	Replies received and used
Northern	1,728	1,536
North Western	3,038	2,466
Eastern	715	626
East Midland	835	728
West Midland	1,353	1,090
North Wales	1,126	948
South Wales	1,716	1,405
Southern	701	594
Mid Western	1,400	1,136
Far Western	1,996	1,638
South Eastern	789	702
England and Wales	15,397	12,868

By applying the appropriate raising factors to the data provided by the replies received, it was possible to compile information relating to all milk selling herds.

As in 1955, besides the 2,000 producer retailers previously mentioned, two classes of dairy herds were excluded from the Census, the herds kept by institutions of one kind or another, and the herds of one or two cows kept for household purposes. There is no similar Census in this country to check results in all their aspects, but a broad reconciliation was made with data obtained by the Ministry of Agriculture in June, 1960, relating to cow numbers and size of herd. This reconciliation is set out in the table overleaf.

**COMPARISON BETWEEN THE BOARD'S CENSUS RESULTS AND
THOSE OF THE MINISTRY OF AGRICULTURE**

No. of Cows in Herds of	Milk Marketing Board	Ministry of Agriculture, Fisheries and Food*
Under 10 cows	166,000	211,400
10—19 cows	648,200	623,000
20—29 cows	569,100	553,000
30—39 cows	384,000	387,400
40—49 cows	264,000	271,900
50 cows and over	520,800	547,700
Total in all Herds	2,552,800	2,594,800

*(1960, Raised ½rd Sample of Agricultural returns).

Apart from the group of under 10 cows and the group of 50 cows and over, there is reasonable agreement between the two sets of figures. In the total, the Ministry's figures exceed our Census figures by 42,000. The greater part of the difference can be attributed to those house cows which are included in the Ministry's results. In the group of large herds at the other end of the scale, the Ministry's figures, which again exceed ours, include cows in the institutional herds—these are generally large.

The distinction between dairy and beef in the Board's Census was the one adopted by the Ministry, but it is clear that this must be a distinction difficult to make in practice (see definitions on page 2). Moreover, at some time or other, during the lactation, the milk and beef functions are interchangeable. In Devon, for example, a beef breed, the Devon, is an important element in the milk selling activities of the area, and the interchange of purpose in individual cows between milk and beef is no doubt very common; indeed the function can vary between one day and the next. In these circumstances an exact reconciliation of results from the Ministry's work and our own, even using common definitions, is hardly possible.

These and other difficulties are inevitable in this country where dairying is practised almost always in conjunction with other lines of production, more often than not with the beef enterprise. While it is important to recognise these difficulties and to understand them, it is felt that they do not detract in any significant way from the results.

Addendum

The Ministry census results on cattle provide the following information:

- (i) Cows and heifers in milk
(a) dairy, (b) beef.

(ii) Cows in calf but not in milk
(a) dairy, (b) beef.

(iii) Heifers in calf with first calf
(a) dairy, (b) beef.

(iv) Females 2 yrs. and over

(v) Females 1-2 years

(vi) Females under 1 year

(vii) Bulls used for service.

(viii) Bulls being reared for service.

(ix) Total cattle.
- Similarly

for

males.

These censuses have been carried out each year for a hundred years. The pattern in cattle for 1960 compared with that of 1955 is shown below.

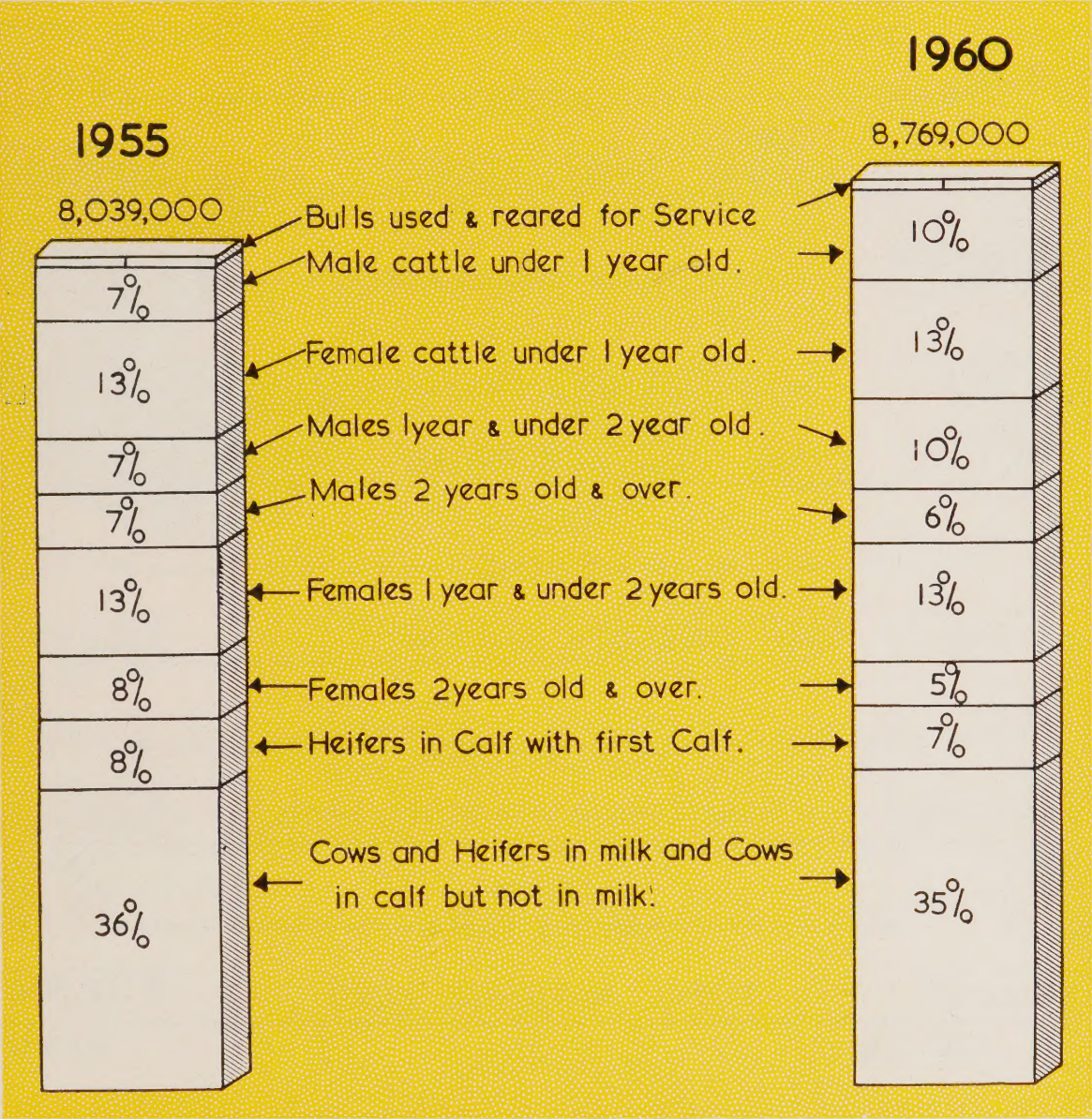


Fig. 1. Structure of cattle population (all categories) in England and Wales
—Source. Ministry of Agriculture.

THE NATIONAL HERD AND ITS DAIRY COMPONENT

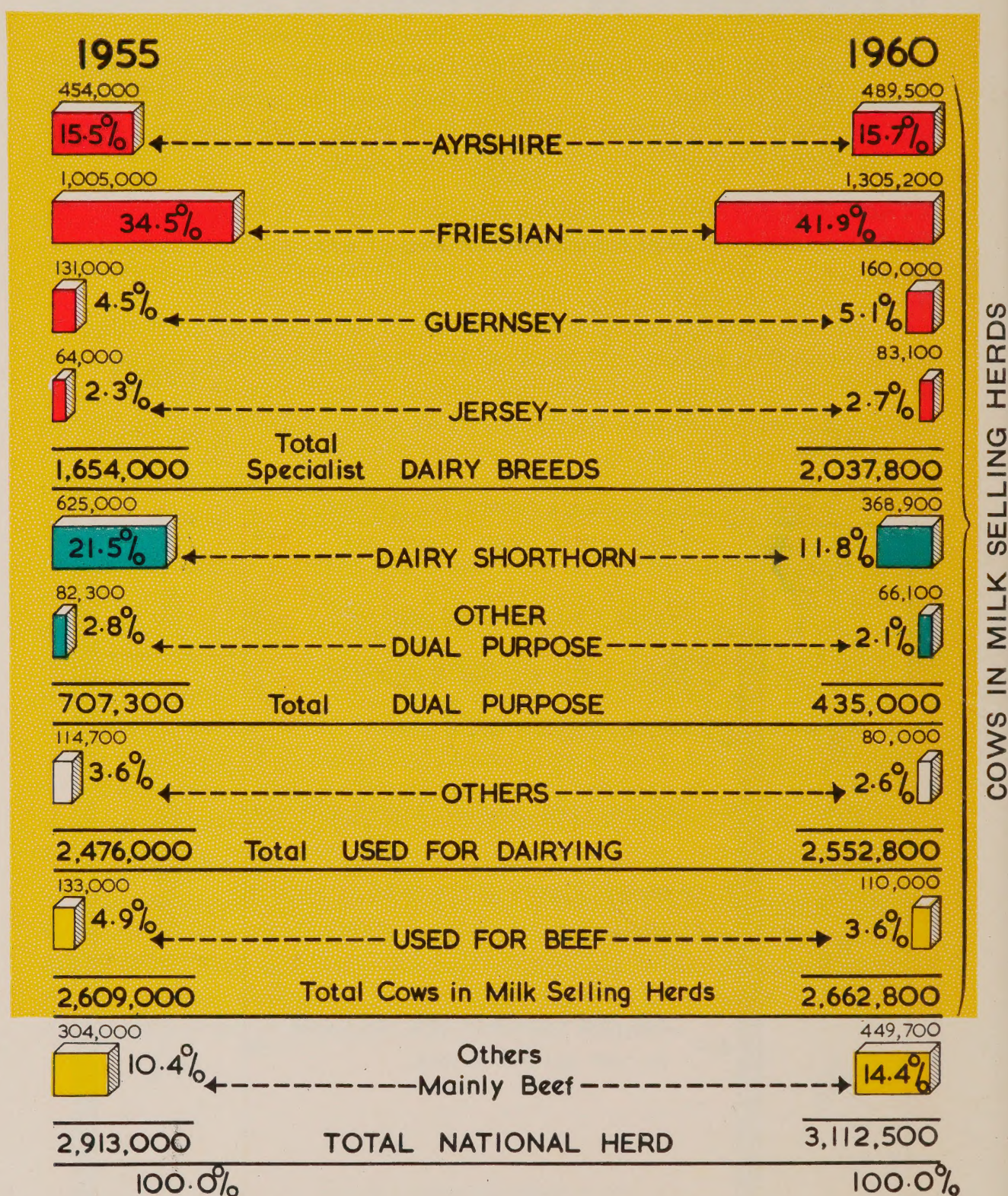


Fig. 2. The above diagram is an attempt to show the changes in the various divisions of the National Herd from 1955 to 1960. (The 1955 statistics are given in parentheses).

The census covers Milk Selling herds, totalling 2,662,800 (2,609,000) of which 2,552,800 (2,476,000) are used for dairying. The breed classification of these 2,552,800 (2,476,000) is shown. "Others" include 36,700 (38,400) beef breeds and 43,300 (76,100) unspecified. The milk selling herds also include 110,000 (133,000) cows which are used to rear calves for beef—no breed information was obtained for these cows, but presumably they are of the Hereford, Aberdeen Angus, Devon, Galloway and Sussex breeds, in that order. The figure of 449,700 (304,000) is obtained by the difference between the cows in the milk selling herds and that obtained by the Ministry of Agriculture for the National Herd. It has been presumed that they are mainly used for beef, making a total beef component of 559,700 (437,000) cows.

BREED STRUCTURE OF THE NATIONAL DAIRY HERD

The National Picture

The National Dairy herd according to our definition includes cows and heifers in milk together with cows-in-calf but not in milk, used for dairying in the milk selling herd. The relative importance of this dairy component as distinct from the beef in the National herd is shown in the diagram on the opposite page. Dairying as distinct from beef predominates in every region. It shows that the cow population in this country has become more specialised in the last five years; the proportion of cows from which milk is sold has fallen, making way for a larger beef component.

The change over the last 50 years is brought out below.

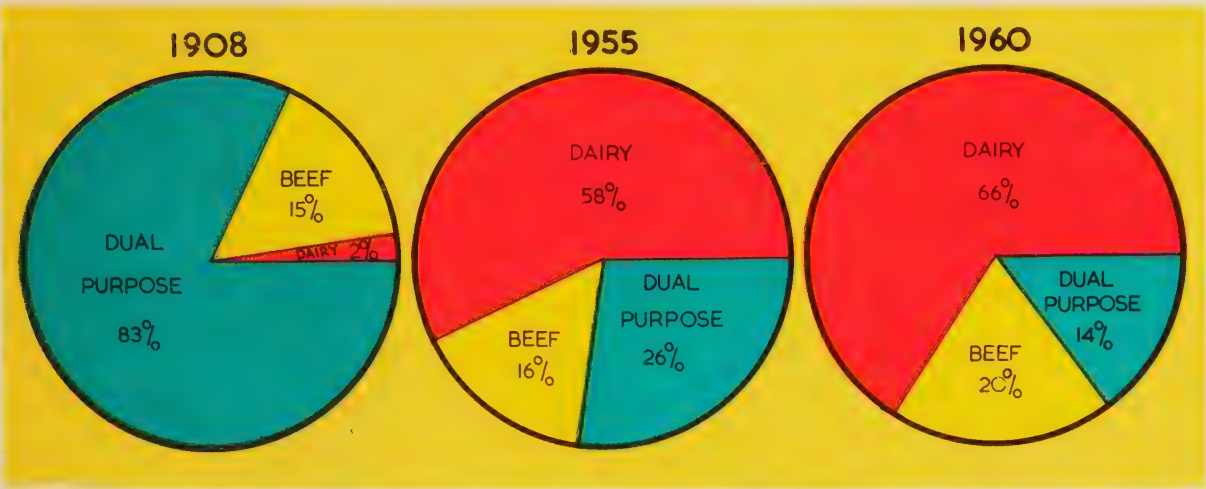


Fig. 3. The National Herd, 1908, 1955 and 1960.

Within the dairy component itself there has been a substantial movement in the direction of the more specialised dairy breeds and away from the dual-purpose types. The rate of this change is persisting strongly and as indicated in the figures for first line replacements is likely to continue in the near future.

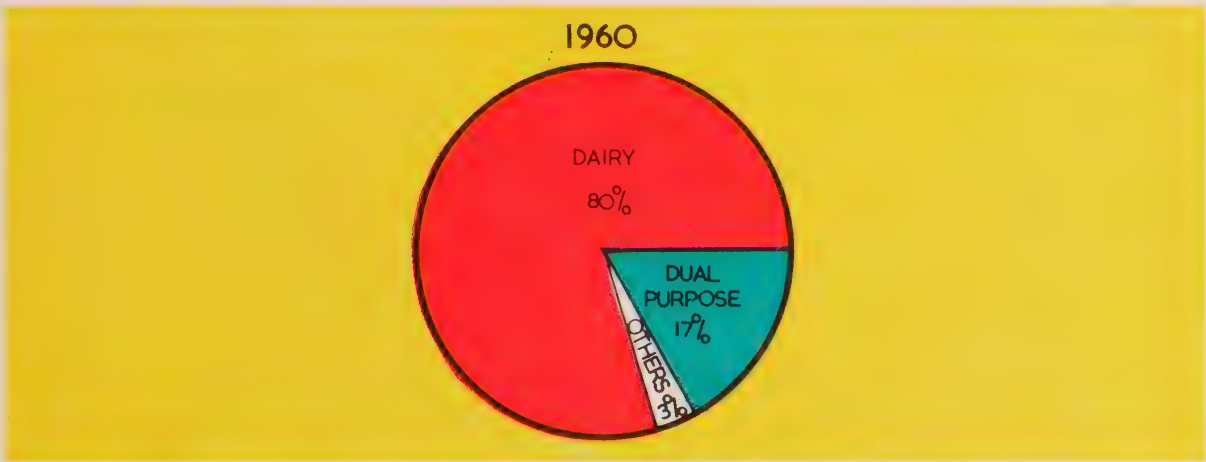


Fig. 4. The National Dairy Herd, 1960.

The Regional Picture

Differences between area and area are marked. The Friesian type dominates now in all areas, but to a far lesser extent in the south than elsewhere, for in this area the Channel Island breeds are an important component. There are, however, some broad distinctions between the main geographical areas and a division of the country into three areas illustrates these distinctions.

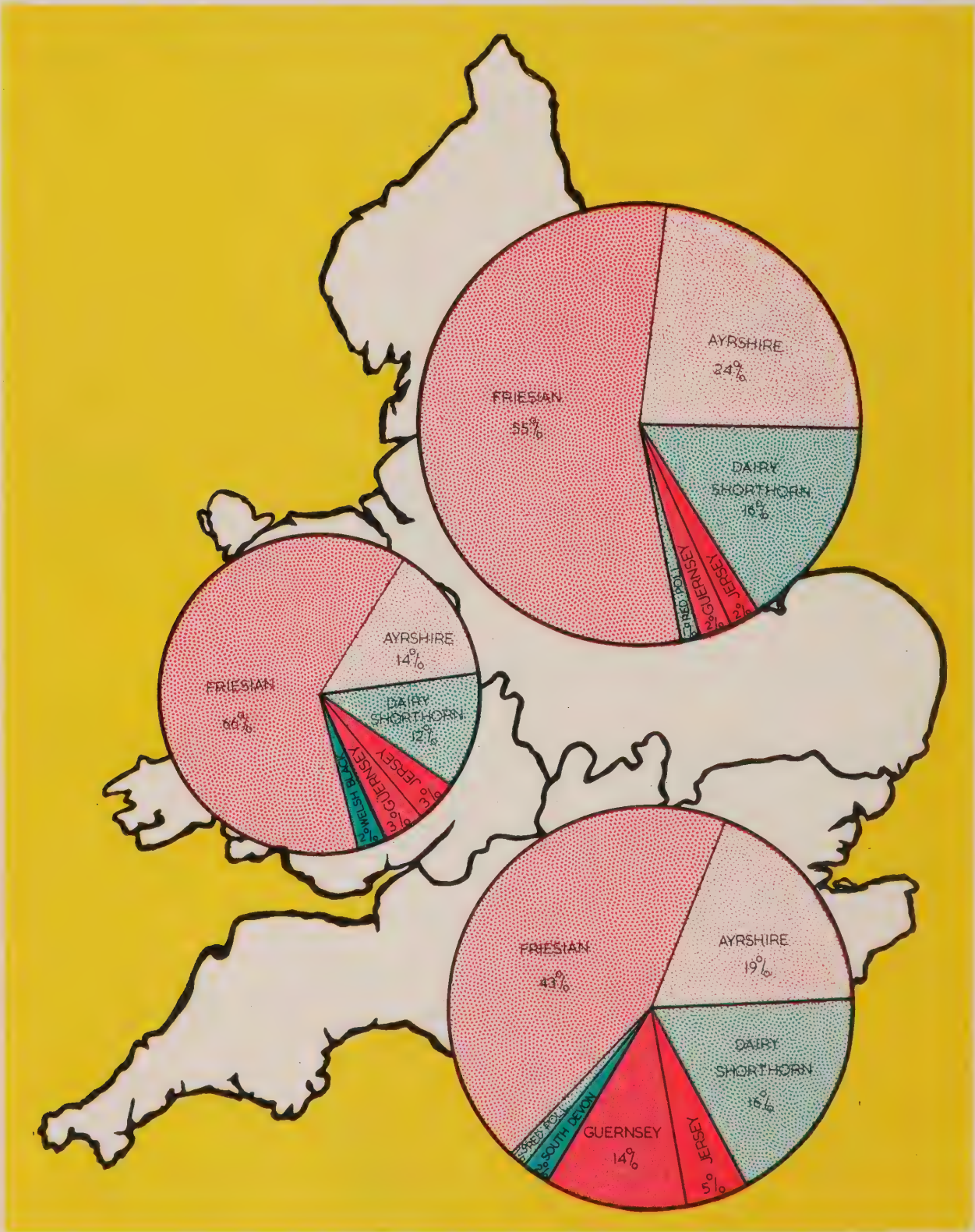


Fig. 5. Regional distribution of the National Dairy Herd.

1. NORTH AND EAST. This area comprises the Northern, North Western, Eastern and East Midland region and accounts for 42 per cent of the country's milk supplies. It includes counties like Cheshire and Lancashire, the most intensive dairying area in the country, and also at the other extreme Lincolnshire, where dairying is of secondary importance. The Friesian is by far the most important breed in every county in this area, but the degree to which it exceeds other breeds in importance varies, for example, from 75 per cent in Norfolk and Suffolk to an almost equal share in importance with Ayrshires in Cumberland and Bedfordshire and with Shorthorn in Westmorland and the North Riding of Yorkshire. The contrast within the area is exemplified by the county of Westmorland on the one hand and Suffolk on the other:—

Breed	Westmorland		Suffolk	
	No.	%	No.	%
Ayrshire	4,900	13.4	2,000	5.0
Friesian	16,000	43.8	30,100	75.9
Shorthorn	14,000	38.6	700	1.9
Other Breeds ...	1,500	4.2	6,900	17.2
Total	36,400	100.0	39,700	100.0

In Suffolk the Shorthorn breed has almost disappeared, whereas in Westmorland it still accounts for two-fifths of the cattle.

2. THE WEST. This comprises the two Welsh Regions together with the West Midland region and accounts for 21 per cent of the total milk supplies.

In this area the Friesian attains the highest overall importance and reaches 81 per cent of total cattle in Montgomeryshire and 68 per cent in the whole of South Wales. Apart from the mountain area of North West Wales where the local breed (Welsh Black) continues to be important, and in Shropshire and Flintshire where the Ayrshire breed makes an important contribution, the Friesian is the only important breed in the area.

The Channel Island breeds, as in the first area, are of very little importance, except in Gloucestershire. The Shorthorn is found in all counties and still retains rather more than average importance in South Wales.

3. SOUTH. This comprises the Southern, Mid-Western, Far-Western and South-Eastern regions and accounts for 37 per cent of total milk supplies. A much more even distribution among the breeds occurs in this area and this is attributed to the incidence of Channel Island breeds, to the Shorthorn breed in the Mid-Western and Far-Western regions, and to a lesser extent to the strength of local breeds (Devon and South Devon in the Far West). In three counties the Friesian is second to other breeds—to Ayrshire in Kent, Hampshire and the Isle of Wight, and to Guernsey in Cornwall. This relatively even distribution between the breeds is found in all counties in this area except Essex, but geographically this latter county has much more in common with East Anglia than with the South.

This feature or spread between the breeds is illustrated by the figures for two counties in this area—Buckinghamshire in the extreme north and West Sussex on the south coast.

Breed	Buckingham		West Sussex	
	No.	%	No.	%
Ayrshire	4,000	13.6	5,500	18.6
Friesian	11,600	39.5	8,800	29.9
Shorthorn	6,700	23.0	3,900	13.4
Channel Island ...	6,500	22.4	10,100	34.5
Other Breeds ...	400	1.5	1,000	3.6
Total ...	29,200	100.0	29,300	100.0

Incidence of crossing and multiplicity of breeds

Change of breed involves cross breeding and the incidence of cross breeding in the National Dairy herd is given in the table below.

AN ESTIMATE OF CROSS BREEDING

	Breed (Straight)		Crosses		Total	
	No.	%	No.	%	No.	%
Dairy						
Ayrshire	445,700	91.1	43,800	8.9	489,500	100.0
Friesian... ..	1,120,700	85.9	184,500	14.1	1,305,200	100.0
Guernsey	154,400	96.6	5,600	3.4	160,000	100.0
Jersey	78,600	94.6	4,500	5.4	83,100	100.0
Total	1,799,400	88.3	238,400	11.7	2,037,800	100.0
Dual Purpose						
British White	100	100.0	—	—	100	100.0
Dairy Shorthorn	335,000	90.8	33,900	9.2	368,900	100.0
Dexter	700	86.4	100	13.6	800	100.0
Kerry	500	100.0	—	—	500	100.0
Red Poll	17,800	96.5	600	3.5	18,400	100.0
South Devon	31,500	96.1	1,200	3.9	32,700	100.0
Welsh Black	11,200	82.4	2,400	17.6	13,600	100.0
Total	396,800	91.2	38,200	8.8	435,000	100.0
Beef						
Aberdeen Angus	28,700	78.2	8,000	21.8	36,700	100.0
Devon						
Galloway						
Hereford						
Lincoln Red						
Sussex						
Others	—	—	43,300	100.0	43,300	100.0
Total all Breeds	2,224,900	87.2	327,900	12.8	2,552,800	100.0

NOTE—1. Friesian includes the Canadian Holstein and Red and White Friesian.

2. Dairy Shorthorn includes Northern Dairy Shorthorn.

SOURCE: Milk Marketing Board Interim Cow Census, 1960.

It should be borne in mind that the figures in this table probably underestimate the incidence of crossing, for herd owners are inclined to give the breed to which they are aiming when they are in the process of change rather than their current position.

Cross breeding does not appear to be so important a feature as in 1955 in the majority of breeds, particularly Friesian.

The other aspect of the situation is the multiplicity of breeds per herd and this is illustrated below.

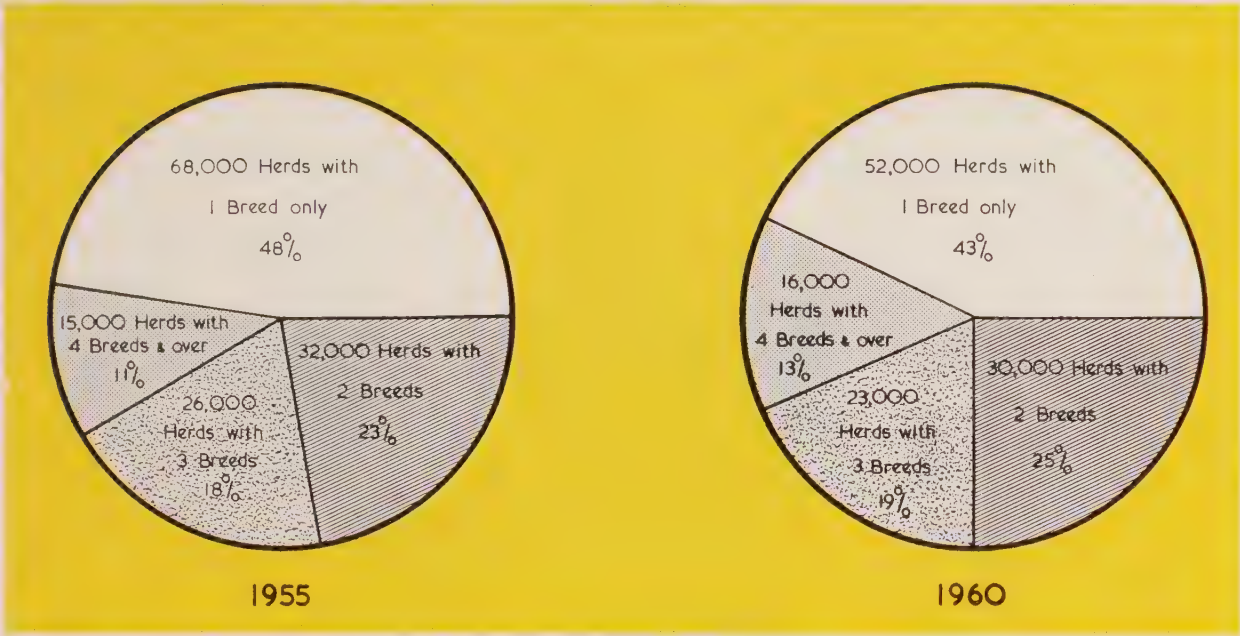


Fig. 6. Distribution of herds by number of breeds per herd.
(Breed includes cross bred animals of the same breed).

The position is that nearly half the dairy herds in this country continue to have more than one breed of cattle; while this is a slightly smaller proportion than formerly, it seems that for many years to come multiplicity of breeds is a condition of our dairy cattle breeding industry.

Summary

The trend from dual-purpose to specialised dairy breeds continues everywhere but the movement has gone very much faster in the Northern than in the Southern half of the country. There exists, however, considerable variation in the position between county and county, largely because of different agricultural conditions and different traditions of livestock keeping.

THE REGIONAL AND COUNTY DISTRIBUTION OF BREEDS

AYRSHIRE

This breed, originating in Scotland, has been well established for a number of years now south of the border, and there are now far more Ayrshire type cows in England and Wales than in their homeland.



Fig. 7. Ayrshire cows as a proportion of total in each county.

The breed is found in all counties and since 1955 it has just about held its own in numerical importance, but not everywhere for in 20 counties it has proportionately fewer numbers and on the other hand in 26 counties it is more important than five years ago. It has gained ground in the main in the south and has lost ground in the north and in Wales. Its early acceptance as a breed on account of its eminent suitability for mechanical milking gave it an initial advantage, particularly in large units, and it seems

to have held this advantage as mechanisation has spread and become more elaborate. In former years it was also favoured for its freedom from tuberculosis.

The performance of the breed in terms of milk yield is about half way between the Friesian and the Dairy Shorthorn breeds.

Year	†Average Yield (lb)	†Percent butterfat	†No. of herds recorded
1960/61	8,810	3.84	2,836
1950/51	7,802	3.85	3,856

The spectacular progress made by this breed which was mentioned in our last Census Report of 1955 continues strongly.

Fig. 8. Friesian cows as a proportion of total in each county.

It has increased its hold everywhere.

SIX COUNTIES WHERE THE FRIESIAN HAS INCREASED MOST BETWEEN 1955 AND 1960

County	1955		1960		Increase 1960 on 1955	
	No. of Cows	Proportion of all cows	No. of Cows	Proportion of all cows	Actual	Percent.
	'000	%	'000	%	'000	%
Westmorland ...	6.9	20.8	16.0	43.8	9.1	132.0
Devon ...	35.5	26.9	65.3	43.3	29.8	83.9
Cumberland ...	19.3	26.1	34.0	41.2	14.7	76.2
Lancashire ...	49.4	41.4	82.0	65.7	32.6	65.9
Berkshire ...	7.4	26.2	11.8	40.9	4.4	59.5
Pembrokeshire ...	21.3	49.0	33.5	70.7	12.2	57.2
England and Wales	1,005.3	40.6	1,305.2	51.1	299.9	29.8

In some regions it has reached a position of overwhelming dominance—in parts of East Anglia and parts of Wales, for example. In milk yield it out-strips all other breeds by a substantial margin.

Year	†Average Yield (lb)	†Percent butterfat	†No. of herds recorded
1960/61	10,021	3.62	9,024
1950/51	8,809	3.49	6,700

The breed has also made considerable progress in regard to butterfat performance, for before the war the average percentage of butterfat of the breed was of the order of 3.25 per cent and now it is 3.59 per cent. Quite apart from the breed's record for performance in terms of milk and butterfat, the steer calf of the breed has in recent years acquired an acceptability for beef which makes it an important source of meat supplies and this has certainly added to the popularity of the Friesian as a breed for dairy farms under present market conditions of narrowing margins for milk. It is seen from figures of first line replacements (p. 30) that the breed will continue to advance its position further in the National Dairy Herd.

DAIRY SHORTHORN

With the increasing emphasis given to milk in the last twenty years or so, this breed has lost ground and in the less favourable climate of milk prices in recent years, where incomes from dairying can only be maintained by increased specialisation, it seems inevitable that the in-roads of the other specialised breeds will continue at the expense of the Shorthorn. In the North and in the South West milk shed, however, it is still kept in large numbers, though over large areas of the eastern counties it has almost disappeared.

Year	†Average Yield (lb)	†Percent Butterfat	†No. of herds recorded
1960/61	8,162	3.58	1,762
1950/51	7,119	3.60	4,822

† See notes on p. 15.

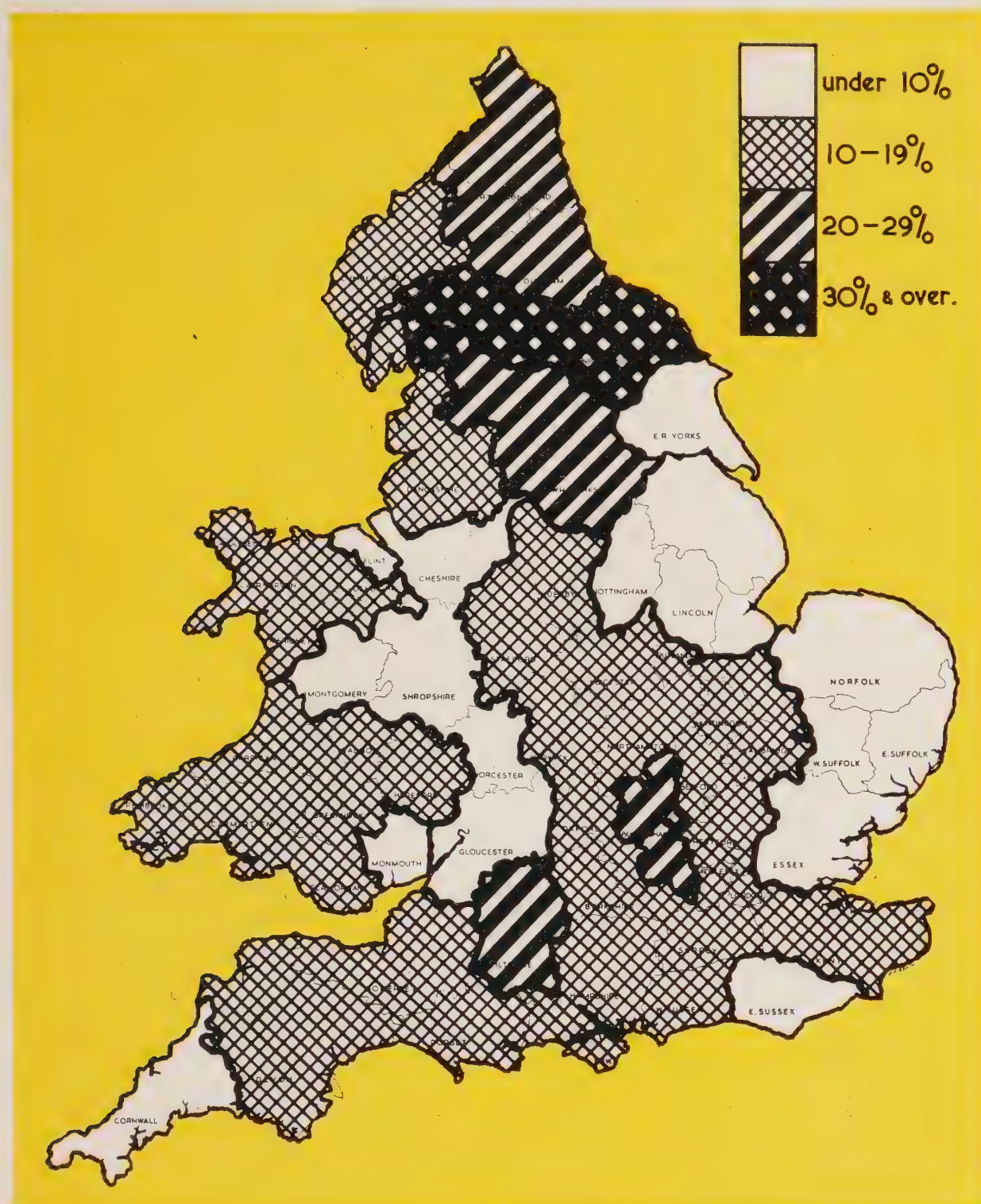


Fig. 9. Dairy Shorthorn as a proportion of total in each county.

GUERNSEY

The breed is firmly established in the southern half of the country, particularly in Cornwall and eastwards in the southern counties. Outside this area it is only in Gloucestershire that it is found in fair numbers (6,000 head amounting to 9 per cent of total cows) but it has, as the map overleaf shows, spread to all counties and has shown an expansion of 23 per cent since 1955. This expansion has been greatest in the traditional areas of the breed and particularly in Kent.

Year	†Average Yield (lb)	†Percent Butterfat	†No. of herds recorded
1960/61	7,669	4.54	1,460
1950/51	7,221	4.57	1,961

† See notes on p. 15.

SOUTH DEVON, DEVON, RED POLL, WELSH BLACK AND LINCOLN RED

These breeds, though relatively unimportant in the national picture, play their part in their particular locality though the Red Poll which originated in East Anglia and was found mainly there until fairly recently, is now dispersed throughout most of the country. By far the most important territorial breeds are the Devons and South Devons. In the Far-Western region these breeds constitute 7% and 13% respectively of the total Dairy Herd.

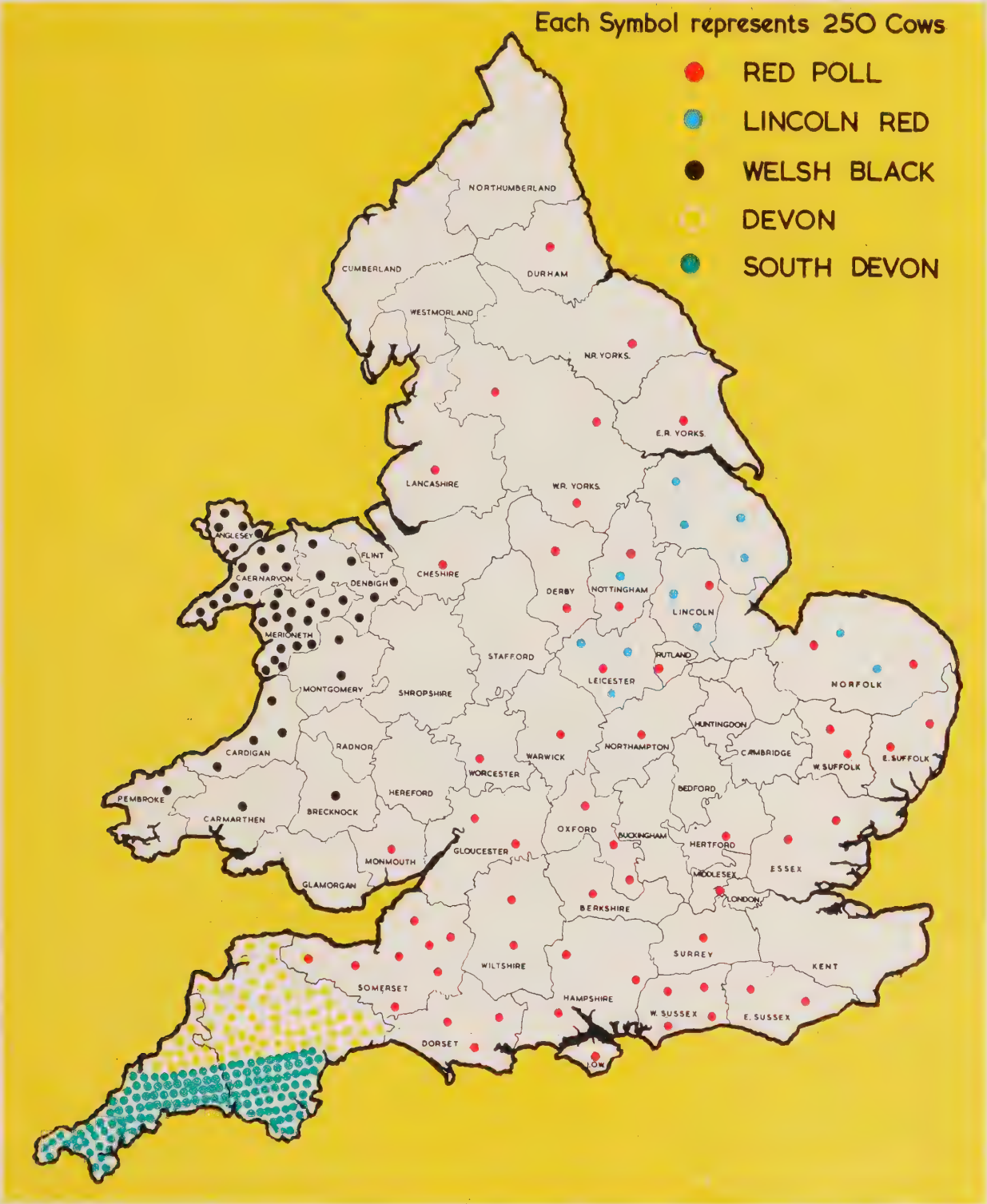


Fig. 11. Spread of the territorial breeds in each county.

South Devon. These are the biggest cattle in the country. The females average 15 cwt. and may reach 20 cwt. Almost all the 33,000 cows of this breed are found in the counties of Devon and Cornwall and they are confined to the southern half of these counties where the demarcation line between them and the Devon breed is clear.

Year	†Average Yield (lb)	†Percent Butterfat	†No. of herds recorded
1960/61	6,624	4.16	192
1950/51	6,327	4.27	409

Devon. This breed is found in the northern part of Devon and Cornwall. It is strictly a beef breed, but the Census shows that there are 17,000 of these cows in milking herds so that they make a contribution to the milk supplies from that area; in addition they are specially suited for rearing calves for the beef market, for the Devon steer calf fetches the highest prices for calves of any beef breed. The breed is well suited to the exposed and high rainfall conditions of North Devon.

Red Poll. The importance of this breed has declined with the other dual purpose breeds. There are now 18,000 cows in the national herd compared with 27,000 five years ago. It is, however, found well scattered through the country and can no longer be regarded strictly as the local breed of East Anglia. The Red Poll Society has recently imported animals of the Danish Red breed to improve the milking qualities of the breed.

Year	†Average Yield (lb)	†Percent Butterfat	†No. of herds recorded
1960/61	7,882	3.67	335
1950/51	7,169	3.64	523

Welsh Black. This breed is found in the north west corner of Wales where it is well suited to the high ground and very high rainfall and hard conditions generally. Its numbers have fallen in the last five years in all counties where it is kept, but the proportion of the breed found in milk selling herds—those covered by our Census—is probably quite small, for it is in the main a breed used by producers of store cattle for the beef market.

Year	†Average Yield (lb)	†Percent Butterfat	†No. of herds recorded
1960/61	6,653	3.99	31
1950/51	5,483	4.24	122

Lincoln Red. The decline in this breed over the last five years has been severe. Again as in the Welsh Blacks, the proportion of the breed found in milk selling herds is comparatively small, so that the Census does not pretend to cover the breed as a whole. In fact it has become in recent years increasingly a beef breed rather than a dual purpose breed and all the Board's bulls at the A.I. centres are of the beef type.

It is, as the map shows, found only in the counties of Lincolnshire, Leicestershire and Nottinghamshire.

Year	†Average Yield (lb)	†Percent Butterfat	†No. of herds recorded
1960/61	7,719	3.64	12
1950/51	6,792	3.69	69

Other Breeds. Finally there are a few herds of the British White, Dexter and Kerry breeds.

† See notes on p. 15.



Fig. 12. British White Cow

Sport & General.



Fig. 13. Dexter Cow.

Farmer & Stockbreeder.



Fig. 14. Kerry Cow.

Sport & General.

The Census figures, which are based on a 10 per cent sample, are not sufficiently accurate to indicate the position of these breeds because of their relatively small numbers. For between them they numbered 1,600 cows in 1955 and it is unlikely that the position has changed radically in five years. Their level of performance is given below.

Year	†Average Yield (lb)	†Percent Butterfat	†No. of herds recorded
British White			
1960/61	7,982	3.83	6
1950/51	6,569	3.91	7
Dexter			
1960/61	5,063	4.17	10
1950/51	4,487	4.23	26
Kerry			
1960/61	7,307	3.97	5
1950/51	6,704	3.89	14

† See notes on p. 15.

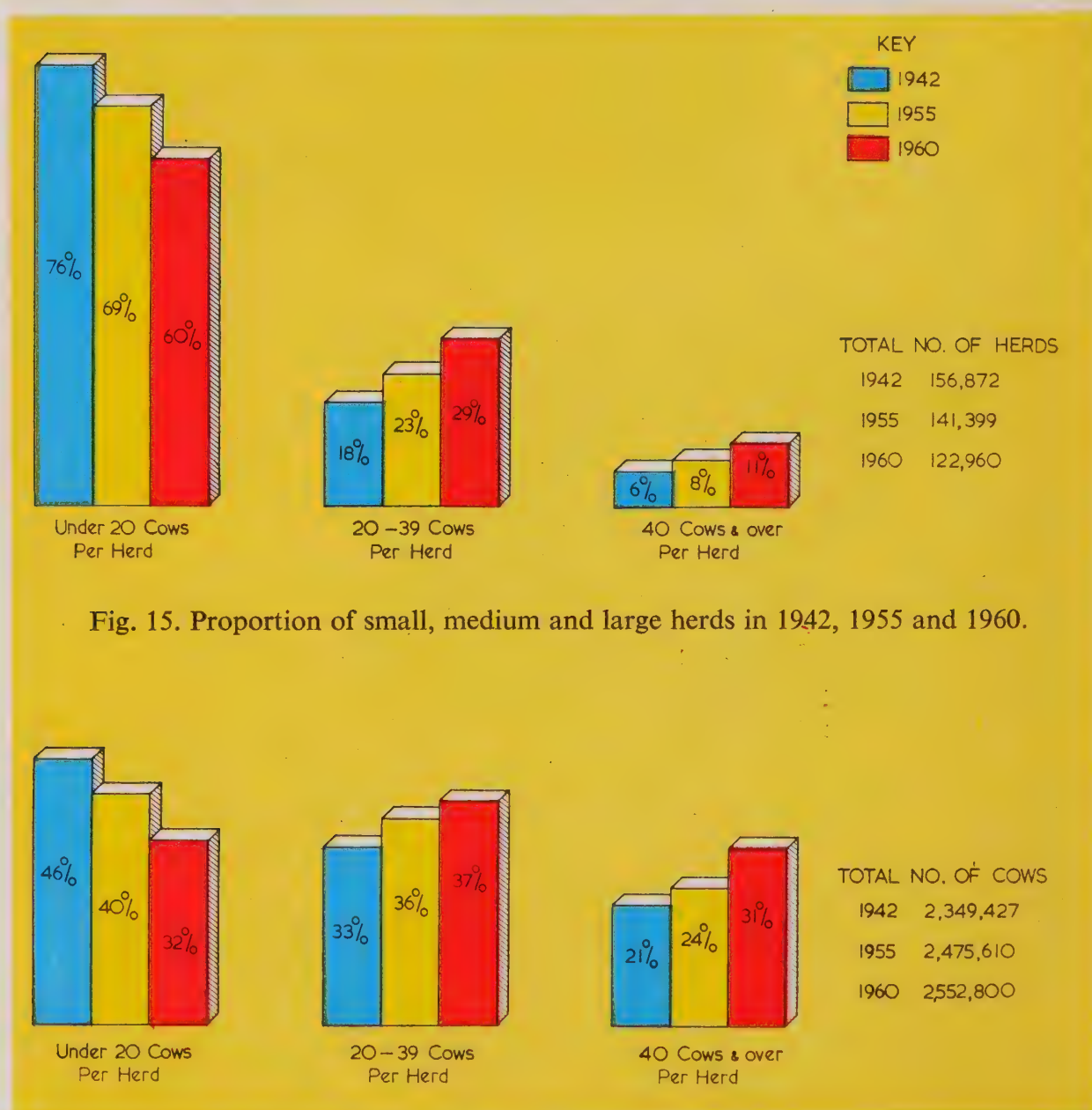
SIZE OF HERD AND SIZE OF FARM

Size of Herd

Simultaneously with the change of breed has been a radical change in the size of milk producers' herds. Between 1942 and 1960 the number of milk producers has fallen from 157,000 to 123,000 and it is still falling at the rate of about 3-4,000 per annum. The rate of fall, however, varies considerably according to herd size.

Number of herds under 10 cows decreased by	39,302	(—58 %)
“ “ “ between 10 and 19 cows decreased by	5,554	(—11 %)
“ “ “ “ 20 “ 29 “ increased by	3,736	(+16 %)
“ “ “ “ 30 “ 39 “ “ “	2,525	(+29 %)
“ “ “ “ 40 “ 49 “ “ “	1,775	(+41 %)
“ “ “ of 50 cows and over “ “	2,908	(+62 %)

The figures suggest a strong movement towards the larger sized herd—smaller herds are either going out or are increasing their size. The average size of herd going out of production according to a study made in 1961 was 12 cows or around half the national average. At the same time the herds which have remained have increased their cow numbers. These two forces have resulted in the situation illustrated below.



The importance in terms of cow numbers of the larger herd is now equal to that of the small herd; this is in contrast to the situation in 1942 when the proportion of the total dairy herd of cows in small herds was twice that in large herds. Regionally the change has been even more striking (see tables in appendix page 36). In the Eastern Region, for example, where the number of herds of under 10 cows has fallen by 4,271 (72 per cent) the number of herds of 40 cows or more has increased by 461 (103 per cent). A similar situation has occurred in the Far Western Region where there were 5,896 fewer herds (—58 per cent) of under 10 cows in 1960 than in 1942, but 303 (+281 per cent) more herds of 40 cows and over. A far more moderate change has taken place in the North Western Region, where there have been less than average reductions in the small herds and comparatively moderate increases in the medium and large herds indicating a far greater degree of stability in the structure of the dairy herds in that region than elsewhere. The national average size of herd in 1960 was 21 cows compared with 17 cows in 1955 and 15 in 1942.

Changes in Herd size 1942, 1955, 1960
(Average number of cows per herd)

Region	Number of cows		
	1942	1955	1960
Northern	12	16	19
North Western	18	19	22
Eastern	12	17	23
East Midland	16	19	22
West Midland	14	19	23
North Wales	10	12	14
South Wales	9	13	15
Southern	19	23	28
Mid Western	21	25	29
Far Western	10	12	16
South Eastern	21	24	29
England and Wales ...	15	17	21

Size of Farm

This Census was the first occasion on which information was collected by the Board on size of dairy farms, so that no comparisons with earlier data can be made. The results—standing by themselves—nevertheless, provide considerable interest and this interest will certainly increase when later figures can be obtained in order to build up comparisons.

The small farm of under 100 acres is the stronghold of dairying in this country at the present time.

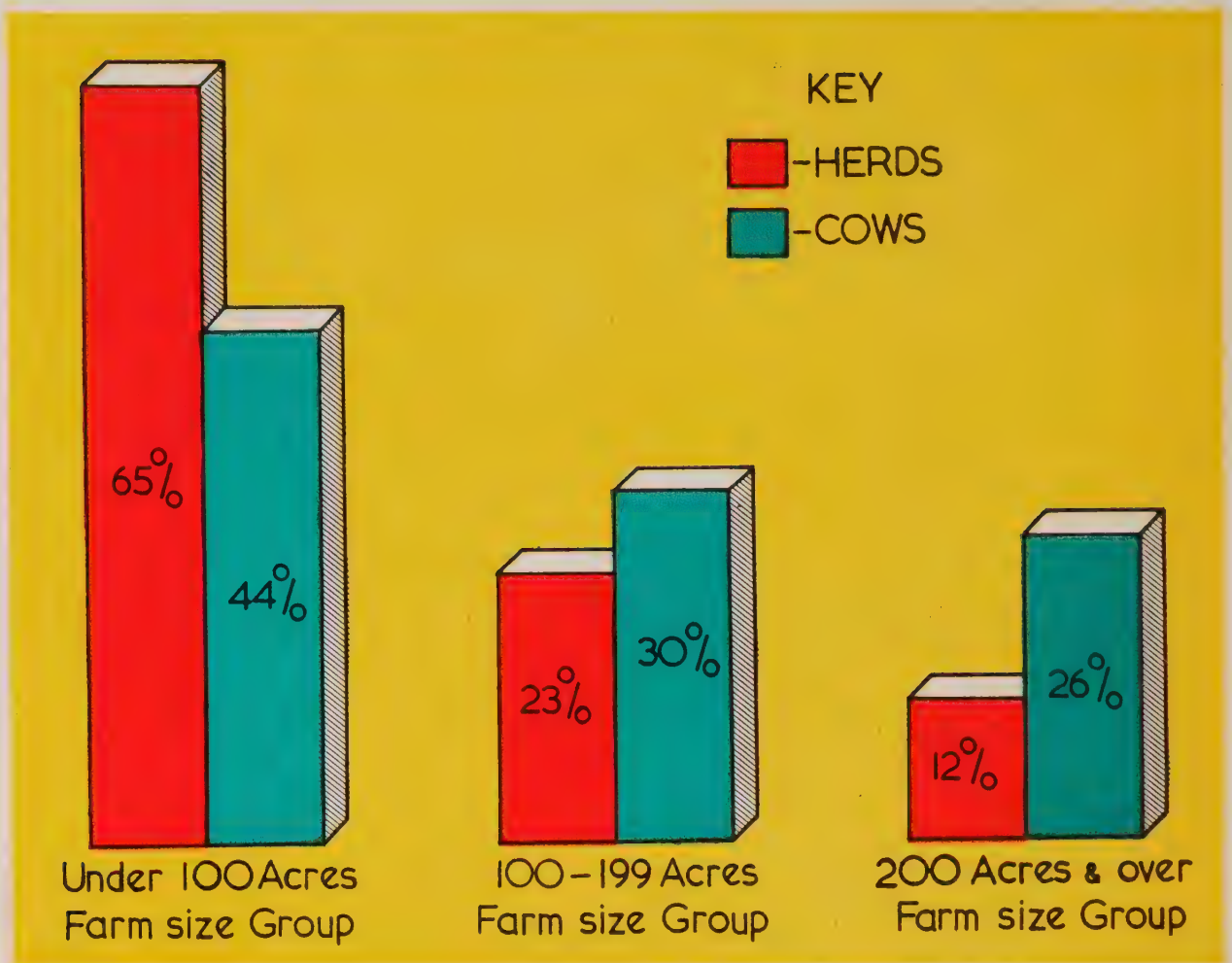


Fig. 17. Proportion of herds and cows in herds on small, medium and large farms, in 1960.

This is particularly so in the West and in the main milk shed of the country, the North Western Region, as the map opposite shows.

The average size of dairy farm is 102 acres, varying from 65 acres in North Wales to 172 acres in the Eastern Region.

Average Size of Dairy Farms

Region	Acres
Northern	108
North Western	77
Eastern	172
East Midland	145
West Midland	106
North Wales	65
South Wales... ..	66
Southern	162
Mid Western	123
Far Western	83
South Eastern	154
England and Wales... ..	102

Compared with Western Europe our herds and dairy farms are large.

ENGLAND & WALES

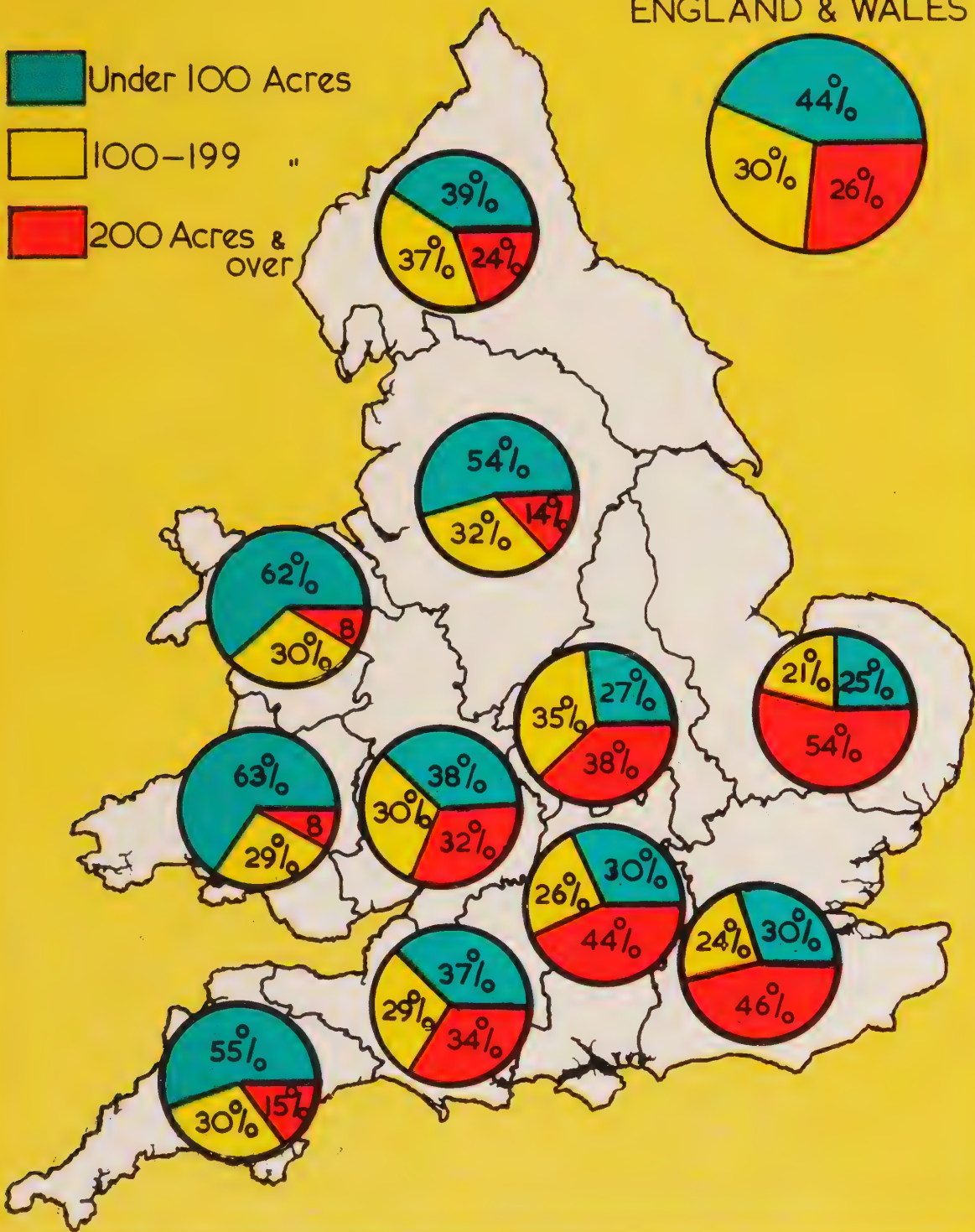


Fig. 18. Regional distribution of size of dairy farms, in 1960.

OTHER FEATURES COVERED BY THE CENSUS

Method of Mating

The impact of A.I. continues to be the most important factor in the situation. Approximately two-thirds of mating in the country is now done by A.I. and one-third by the natural method, compared with a 50:50 division in 1955.

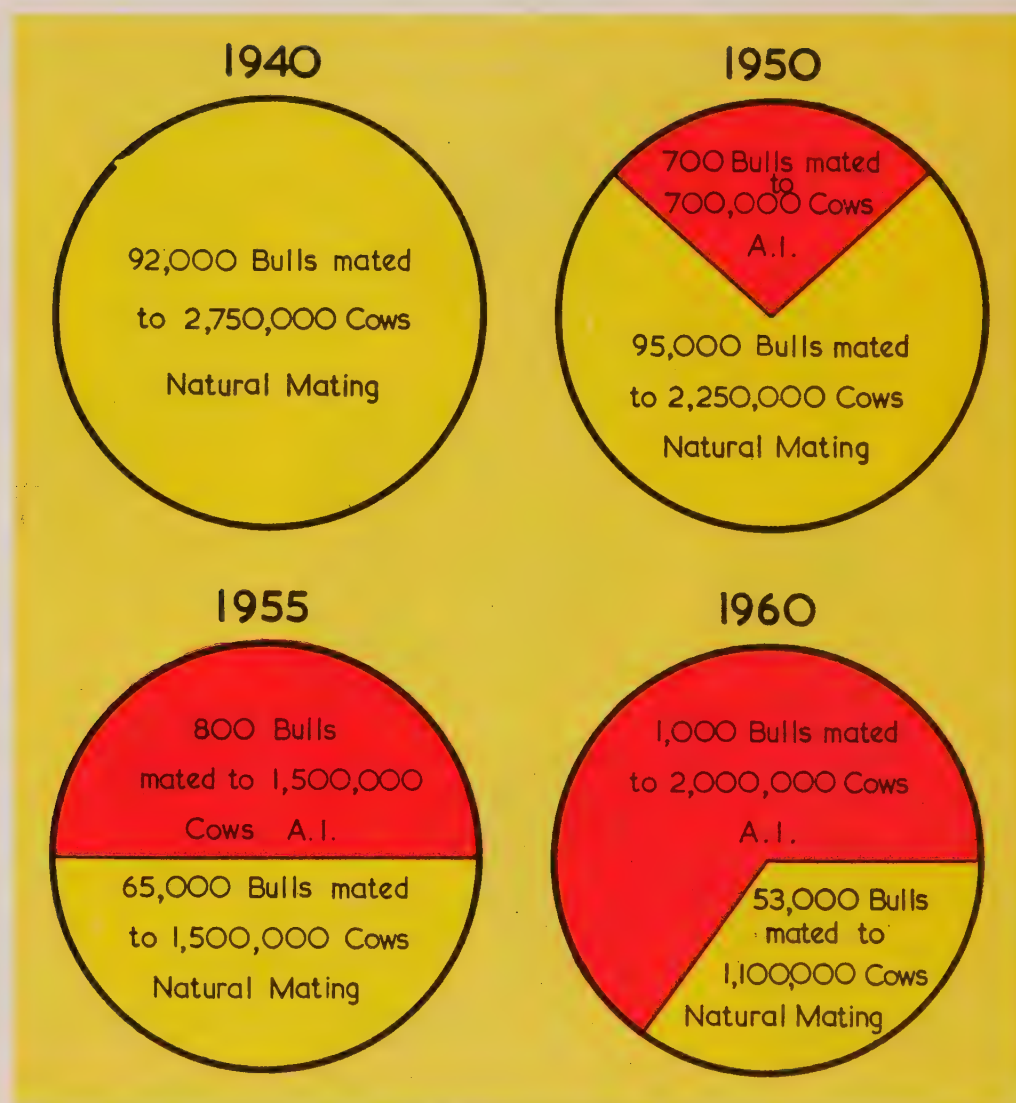


Fig. 19. Method of mating. Change between 1940 and 1960.

The exclusive use of natural mating is now found only in 13 per cent of herds compared with 33 per cent in 1955. A.I. is particularly important in the small herds, but in the last five years it has made progress in the medium and even large herds, for now two-thirds of herds of 50 cows and over use A.I. either wholly or partially.

Regionally, the use of A.I. follows the pattern of size of herd; in South Wales and the Far Western Region, for example, A.I. is used exclusively in three quarters of the herds. The Northern Region, on the other hand, is an area where natural mating is most prevalent, but even in this region the proportion of natural mating herds is now only 23 per cent compared with 49 per cent five years ago.

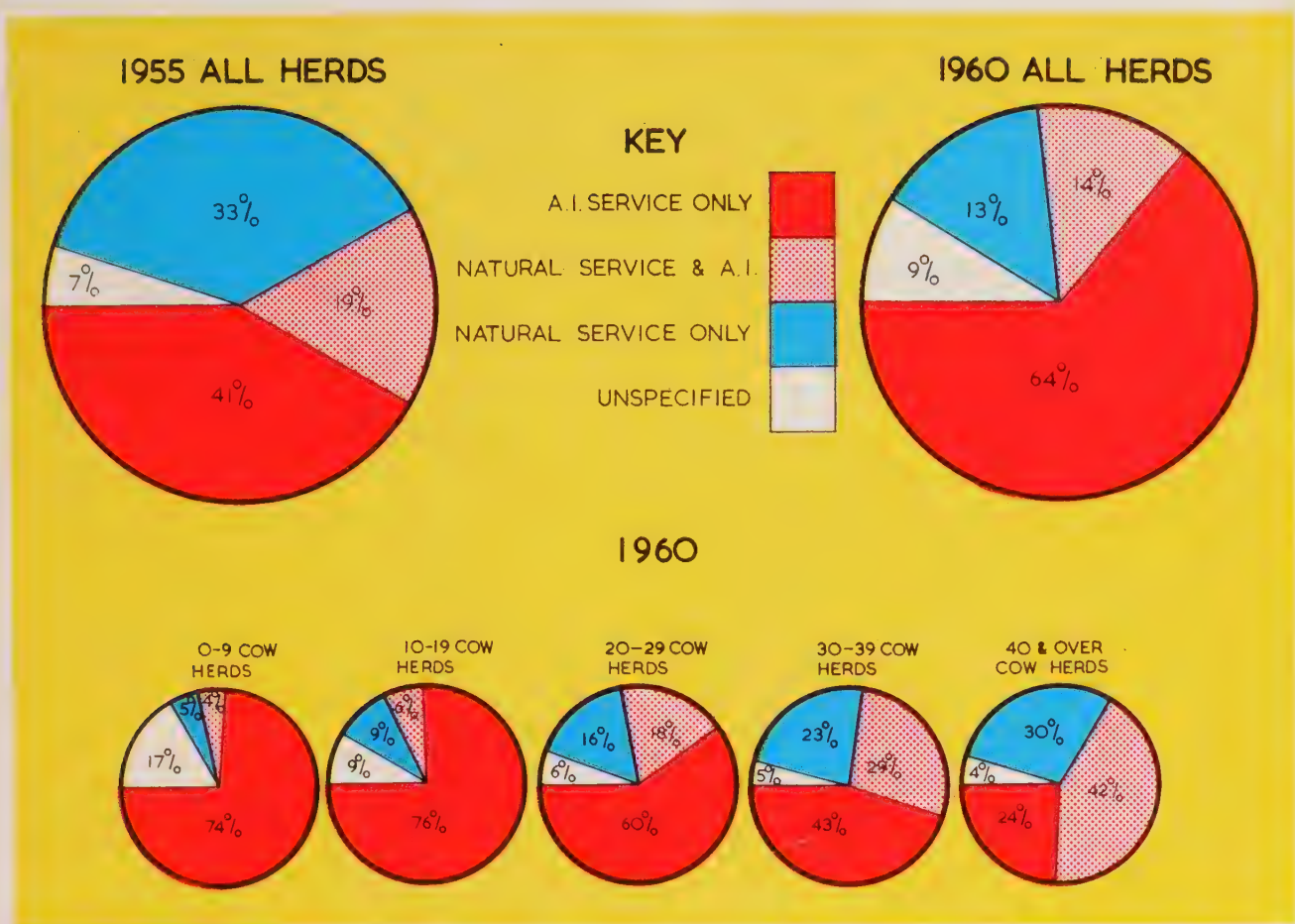


Fig. 20. Method of mating, by size of herd.

The Beef Component

Milk production continues to be the prime purpose of keeping cows in this country—82 per cent of total cows being used for milk according to the Ministry of Agriculture's records.

The relative importance of Beef and Dairy cattle in the National Herd in each region.

	Beef	Dairy
Northern	25	75
North Western	8	92
Eastern	32	68
East Midland	19	81
West Midland	23	77
North Wales	22	78
South Wales	21	79
Southern	18	82
Mid Western	11	89
Far Western	16	84
South Eastern	18	82
Total England and Wales	18	82
Total England and Wales 1955	15	85

In the main dairying areas of the North Western and Mid Western regions the dairying proportion reaches 92 per cent and 89 per cent respectively and in the rearing areas of the North and West and even more so in the fattening areas of the East the beef element is most important.

Compared with the situation in 1955 it seems that resources have been released from dairying for beef production, and the continued expansion in milk production has been effected by a smaller proportion of the national herd using a more specialised type of cow. This is illustrated in the diagram on page 9. The estimated contribution of the dairy herd to our domestic output of beef, which was estimated at 75 per cent in 1955 has been maintained, and if anything, increased. The 120,000 milk selling herds continue to contribute in three ways to beef supplies. There is cow beef from the dairy cow when she has finished her dairying life; then there are the purely beef cows in our dairying herds—these have declined in numbers since 1955 from 130,000 to 110,000. But of far greater importance is the third contribution which is made by the steer calves and the surplus heifer calves from dairy cows which are increasingly being kept for beef. With the greater acceptability of the black and white calf for beef this contribution has increased remarkably in recent years. This is very clearly brought out in the Ministry of Agriculture's Census figures of male stock in the country.

Number of male cattle in England and Wales (thousands)

Year	Under 1 year old	1 to 2 years old	2 years old & over	Total
1950	475	406	476	1,357
1960	904	859	497	2,260

Source—Ministry of Agriculture June census 1950 and 1960

These have increased by approximately 50 per cent in recent years and as the number of beef cows has remained stable the whole of the increase must have come from the dairy cow component. This feature of "beef" calves from dairy herds was studied in the figures obtained in the Board's Census. The position is that the great majority of milk selling herds (84 per cent) have one or more calves available for beef. The Census also shows that overall the most common practice is to dispose of these calves shortly after birth, especially in the main dairying areas of the North Western and Mid Western regions. In the Northern region, however, rearing to yearling stage is the most common practice, and in the East Midland region rearing to slaughter stage is the most common practice. The important feature is that the dairy cow is being used increasingly to augment our beef supplies, despite the fact that she is of a far more specialised dairy type than formerly. This new development has been made possible by the widespread use of our beef stud standing at A.I. Centres.

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APPENDICES

BREED DISTRIBUTION

The Dairy Herd and its First Line Replacements

Breed Type (including Crosses)	The Dairy Herd (Cows and heifers in milk and cows in calf but not in milk)				1st Line Replacements (Heifers in calf with first calf)			
	Number		Per cent		Number		Per cent	
	1955	1960	1955	1960	1955	1960	1955	1960
Dairy:								
Ayrshire ...	453,900	489,500	18.3	19.2	81,800	82,900	16.4	15.4
Friesian ...	1,005,300	1,305,200	40.6	51.1	230,600	307,900	46.1	57.0
Guernsey ...	130,700	160,000	5.3	6.2	28,500	31,800	5.7	5.9
Jersey ...	63,900	83,100	2.6	3.3	14,200	16,400	2.8	3.0
Total	1,653,800	2,037,800	66.8	79.8	355,100	439,000	71.0	81.3
Dual Purpose:								
Dairy Shorthorn	624,800	368,900	25.3	14.5	108,000	71,600	21.7	13.3
Red Poll ...	27,200	18,400	1.1	0.7	6,600	4,300	1.3	0.8
South Devon ...	37,300	32,700	1.5	1.3	8,100	6,600	1.6	1.2
Welsh Black ...	16,400	13,600	0.7	0.5	2,200	2,700	0.4	0.5
Others ...	1,600	1,400	0.0	0.0	300	200	0.0	0.0
Total	707,300	435,000	28.6	17.0	125,200	85,400	25.0	15.8
Beef:								
Devon ...	24,500	17,800	1.0	0.8	3,600	2,400	0.7	0.5
Hereford ...	4,200	11,700	0.2	0.5	600	2,100	0.1	0.4
Aberdeen Angus,		1,800		0.1		1,500		0.3
Galloway and } Sussex ... }	1,100	2,300	0.0	0.0	300	500	0.1	0.0
Lincoln Red ...	8,600	3,100	0.3	0.1	1,900	900	0.4	0.2
Total	38,400	36,700	1.5	1.5	6,400	7,400	1.3	1.5
Unspecified ...	76,100	43,300	3.1	1.7	13,300	7,800	2.7	1.4
GRAND TOTAL	2,475,600	2,552,800	100.0	100.0	500,000	539,600	100.0	100.0

Note:—Figures are to the nearest 100.

Source: Milk Marketing Board, Cow Census 1955, and Interim Cow Census 1960.

THE NATIONAL HERD, 1960

Dairy and Beef

REGION	Number of cows used for		TOTAL COWS	Dairying as a proportion of total %	Number of Milk Selling Herds with		
	Dairying (In Milk selling herds)	Beef and other Purposes			Dairy cows only	Dairy and Beef	Total
	(1)	(2) *	(3)	(4)	(5)	(6)	(7)
Northern	267,548	90,764	358,312	74.7	11,011	2,861	13,872
North Western	525,525	39,047	574,572	91.5	22,439	1,950	24,389
Eastern	126,589	59,908	186,487	67.9	4,437	591	5,619
East Midland	138,139	32,367	170,506	81.0	5,091	1,244	6,335
West Midland	241,695	72,624	314,319	76.9	8,686	1,989	10,675
North Wales	125,356	36,250	161,606	77.6	7,187	1,712	8,899
South Wales	196,182	53,822	250,004	78.5	10,821	2,657	13,478
Southern	159,350	34,724	194,074	82.1	5,033	738	5,771
Mid-Western	338,653	42,386	381,039	88.9	10,305	1,384	11,689
Far Western	249,864	47,209	297,073	84.1	11,176	4,686	15,862
South Eastern	183,955	40,453	224,408	82.0	5,766	610	6,376
Total England and Wales	2,552,857	859,553	3,112,490	82.0	102,546	20,420	122,966
Total England and Wales 1955	2,475,610	437,666	2,913,276	85.0	119,903	21,496	141,399

* Column (2): This is obtained by the difference between columns (1) and (3), and includes cows used for beef production in milk selling herds and cows used for beef production in non milk selling herds and cows in herds from which no milk is sold.

Source: Milk Marketing Board, 1960 Interim Cow Census.
Ministry of Agriculture, Fisheries and Food Survey, 1960

BREED DISTRIBUTION BY COUNTIES OF THE NATIONAL DAIRY HERD 1960 (dairy component)

Numbers of cows in thousands

County and Region	Dairy					Dual Purpose and Others			Grand Total
	Ayrshire	Friesian	Guernsey	Jersey	Total	Shorthorn	Others *	Total	
	← '000 →								
Cumberland	32.6	34.0	0.1	0.5	67.2	14.0	1.1	15.2	82.4
Durham & Northumberland	15.5	20.2	0.4	1.2	37.3	14.2	3.6	17.8	55.1
Westmorland	4.9	16.0	—	0.1	21.0	14.0	1.4	15.4	36.4
Yorkshire East Riding ...	4.0	16.2	0.4	0.9	21.5	1.8	1.0	2.8	24.3
Yorkshire North Riding ...	12.0	28.0	0.4	0.7	41.1	27.2	1.1	28.3	69.4
Northern	69.0	114.4	1.3	3.4	188.1	71.2	8.3	79.5	267.6
Cheshire	33.4	72.5	1.5	2.5	109.9	9.9	2.4	12.3	122.2
Lancashire	24.3	82.0	0.4	2.5	109.2	13.4	2.2	15.6	124.8
Yorkshire West Riding ...	28.4	46.4	0.7	1.8	77.3	22.1	3.2	25.3	102.6
Derbyshire	22.4	39.7	2.4	1.9	66.4	11.6	1.7	13.3	79.7
Staffordshire	26.8	52.4	1.8	2.3	83.3	10.0	2.8	12.8	96.1
North Western	135.3	293.0	6.8	11.0	446.1	67.0	12.3	79.3	525.4
Lincolnshire	7.0	16.1	0.8	0.3	24.2	1.6	2.0	3.6	27.8
Cambridge, Isle of Ely Peterborough, Huntingdon }	2.0	6.8	0.7	0.8	10.3	1.5	0.4	1.9	12.2
Norfolk	6.0	34.6	0.9	1.6	43.1	2.0	1.7	3.7	46.8
Suffolk... ..	2.0	30.1	2.7	1.8	39.6	0.7	2.4	3.1	39.7
Eastern	17.0	87.6	5.1	4.5	114.2	5.8	6.3	12.3	126.5
Bedfordshire	2.9	3.3	0.4	0.6	7.2	1.0	0.1	1.1	8.3
Leicester and Rutland ...	8.6	24.6	1.4	0.7	35.3	4.8	2.7	7.5	42.8
Northamptonshire	4.4	13.6	0.5	1.0	19.5	3.1	1.1	4.2	23.7
Nottinghamshire	5.4	13.9	1.4	1.0	21.7	2.1	2.2	4.3	26.0
Warwickshire	6.1	20.7	1.3	1.4	29.5	7.2	0.8	8.0	37.5
East Midland	27.4	76.1	5.0	4.7	113.2	18.2	6.9	25.1	138.3
Gloucestershire	8.4	43.4	5.9	2.5	60.2	6.0	1.8	7.8	68.0
Herefordshire	2.5	15.3	1.5	0.3	19.6	2.8	0.5	3.3	22.9
Monmouthshire	1.9	16.8	0.9	0.8	20.4	2.1	1.0	3.1	23.5
Worcestershire	4.0	15.9	1.2	0.4	21.5	2.4	1.2	3.5	25.1
Shropshire	26.1	62.1	1.0	1.7	90.9	8.2	0.9	11.1	102.0
West Midland	42.9	153.5	10.5	5.7	212.6	21.5	7.4	28.9	241.5

* Included in this 'OTHERS' group are important dual-purpose regional breeds, and also cows of beef breeds that are used for dairying in milking herds.

1. *South Devon*—Total of 33,100, of which 17,400 and 15,300 are found in Devon and Cornwall respectively. The remaining 700 being spread over 19 counties.

2. *Red Poll*—Total of 18,400, spread fairly evenly over all counties, with the exception of the Welsh counties.

3. *Welsh Black*—Total of 13,600, of which 7,800 are in Anglesey, Caernarvon and Merionethshire, 1,600 in Derbyshire and 900 in Cardiganshire. The remaining 3,300 being found mainly in the Northern and North Western regions.

Beef breeds

(a) *Devon*—totalling 17,400. 11,700 of which are in Devon and 4,800 in Cornwall, and 400 in both Dorset and Somerset. The remaining 100 being found in the Northern Region.

BREED DISTRIBUTION BY COUNTIES OF THE NATIONAL DAIRY HERD 1960 (dairy component)

Numbers of cows in thousands

County and Region	Dairy					Dual Purpose and Others			Grand Total
	Ayrshire	Friesian	Guernsey	Jersey	Total	Shorthorn	Others *	Total	
	← '000 →								
Anglesey, Caernarvon and Merionethshire }	6.4	13.6	0.4	0.6	21.0	5.4	9.8	15.2	36.2
Denbighshire ...	4.9	22.6	0.1	0.4	28.0	7.2	2.4	9.6	37.6
Flintshire ...	6.3	16.1	0.3	0.1	22.8	2.0	0.4	2.4	25.2
Montgomery ...	2.2	21.5	0.2	0.2	24.1	0.8	1.5	2.3	26.4
North Wales ...	19.8	73.8	1.0	1.3	95.9	15.4	14.1	29.5	125.4
Brecon, Radnor and Glamorganshire }	2.4	23.9	1.4	0.6	28.3	5.0	2.3	7.3	35.6
Cardiganshire ...	2.5	21.4	1.1	2.3	27.3	6.9	2.5	9.4	36.7
Carmarthenshire ...	3.6	54.0	0.3	3.4	61.3	11.4	3.7	15.1	76.4
Pembrokeshire ...	3.5	33.5	0.4	1.8	39.2	6.1	2.1	8.2	47.4
South Wales ...	12.0	132.8	3.2	8.1	156.1	29.4	10.6	40.0	196.1
Berkshire ...	5.4	11.8	5.3	1.9	24.4	4.0	0.3	4.4	28.8
Buckinghamshire ...	4.0	11.6	3.6	2.9	22.2	6.7	0.4	7.1	29.3
Hampshire and Isle of Wight }	20.3	20.1	15.1	3.4	58.8	12.1	3.8	15.9	74.7
Oxfordshire ...	1.8	13.5	3.8	2.2	21.3	3.9	1.4	5.3	26.6
Southern ...	31.5	57.0	27.8	10.4	126.7	26.7	5.9	32.7	159.4
Dorset ...	17.3	41.5	8.9	2.0	69.7	10.9	3.8	14.7	84.4
Somerset ...	31.6	78.0	9.8	3.6	123.0	30.1	5.3	35.4	158.4
Wiltshire ...	19.5	43.2	8.3	2.3	73.2	21.0	1.6	22.6	95.8
Mid Western ...	68.4	162.7	27.0	7.9	266.0	62.0	10.7	72.7	338.7
Devon ...	15.2	65.3	10.1	4.9	95.5	21.3	34.1	55.3	150.9
Cornwall ...	8.9	24.1	32.5	2.3	67.8	8.6	22.7	31.3	99.1
Far Western ...	24.1	89.4	42.6	7.2	163.3	29.9	56.8	86.7	250.0
Essex ...	4.8	19.3	0.8	2.3	27.2	1.4	0.8	2.2	29.4
Hertford, Surrey, London and Middlesex }	10.3	14.5	5.2	4.0	34.0	7.0	1.6	8.6	42.6
Kent ...	11.0	9.0	8.5	2.7	31.2	6.2	2.3	8.5	39.7
East Sussex ...	10.5	13.3	8.4	6.6	38.8	3.3	0.8	4.1	42.9
West Sussex ...	5.5	8.8	6.8	3.3	24.4	3.9	1.0	4.9	29.3
South Eastern ...	42.1	64.9	29.7	18.9	155.6	21.8	6.5	28.3	183.9
Total for England and Wales	489.5	1,305.2	160.0	83.1	2,037.8	368.9	146.0	515.0	2,552.8

(b) *Lincoln Red*—Total of 3,100 cows; 1,600 of which are found in Lincoln, 800 in Leicester and Rutland, 350 in Norfolk and 300 in Nottingham.

(c) *Hereford*—Total of 11,600, spread fairly evenly over East Midland, West Midland, North and South Wales and North Western Regions.

In addition there were 1,600 Aberdeen Angus, 2,200 Galloway and 100 Sussex breed cows.

BREED DISTRIBUTION BY COUNTIES OF THE NATIONAL DAIRY HERD 1960 (dairy component)

Per cent of each county and region

County and Region	Dairy					Dual Purpose and Others			Grand Total
	Ayrshire	Friesian	Guernsey	Jersey	Total	Shorthorn	Others *	Total	
	← % →								
Cumberland	39.7	41.2	0.1	0.5	81.5	16.9	1.6	18.5	100.0
Durham and Northumberland ...	28.2	36.7	0.7	2.2	67.8	25.8	6.4	32.2	100.0
Westmorland	13.4	43.8	0.0	0.3	57.5	38.6	3.9	42.5	100.0
Yorkshire East Riding	16.1	67.1	1.6	3.8	88.6	7.8	3.6	11.4	100.0
Yorkshire North Riding	17.3	40.0	0.6	1.1	59.0	39.3	1.7	41.0	100.0
Northern	25.8	42.7	0.5	1.3	70.3	26.6	3.1	29.7	100.0
Cheshire	27.3	59.3	1.3	2.0	89.9	8.1	2.0	10.1	100.0
Lancashire	19.5	65.7	0.3	2.0	87.5	10.7	1.8	12.5	100.0
Yorkshire West Riding	27.6	45.3	0.6	1.8	75.3	21.5	3.2	24.7	100.0
Derbyshire	28.2	49.7	3.1	2.3	83.3	14.6	2.1	16.3	100.0
Staffordshire	27.8	54.6	1.8	2.4	86.6	10.4	3.0	13.4	100.0
North Western	25.7	55.8	1.3	2.1	84.9	12.7	2.4	15.1	100.0
Lincolnshire	25.2	57.9	3.0	0.9	87.0	5.6	7.4	13.0	100.0
Cambridge, Isle of Ely, ... } Peterborough and Huntingdon	16.5	55.3	5.8	6.4	84.0	12.4	3.6	16.0	100.0
Norfolk	12.7	73.8	1.9	3.5	91.9	4.2	3.9	8.1	100.0
Suffolk	5.0	75.9	6.8	4.5	92.2	1.9	5.9	7.8	100.0
Eastern	13.4	69.1	4.1	3.5	90.1	4.6	5.3	9.9	100.0
Bedfordshire	34.5	39.3	5.2	7.1	86.1	12.4	1.5	13.9	100.0
Leicester and Rutland	20.1	57.5	3.2	1.7	82.5	11.3	6.2	17.5	100.0
Northamptonshire	18.7	57.5	2.1	4.1	82.4	13.3	4.3	17.6	100.0
Nottinghamshire... ..	20.7	53.5	5.3	3.8	83.3	8.0	8.7	16.7	100.0
Warwickshire	16.3	55.2	3.4	3.8	78.7	19.2	2.1	21.3	100.0
East Midland	19.8	55.0	3.6	3.4	81.8	13.2	5.0	18.2	100.0
Gloucestershire	12.3	63.9	8.7	3.7	88.6	8.8	2.6	11.4	100.0
Herefordshire	10.9	66.7	6.5	1.1	85.2	12.4	2.4	14.8	100.0
Monmouthshire	8.1	71.2	3.8	3.8	86.9	9.1	4.0	13.1	100.0
Worcestershire	15.9	63.5	4.9	1.6	85.9	9.8	4.3	14.1	100.0
Shropshire	25.6	60.7	1.0	1.7	89.0	8.0	3.0	11.0	100.0
West Midland	17.7	63.5	4.4	2.4	87.4	8.9	3.7	12.6	100.0

BREED DISTRIBUTION BY COUNTIES OF THE NATIONAL DAIRY
HERD 1960 (dairy component)

Per cent of each county and region

County and Region	Dairy					Dual Purpose and others			Grand Total
	Ayrshire	Friesian	Guernsey	Jersey	Total	Shorthorn	Others *	Total	
	← % →								
Anglesey, Caernarvon and Merionethshire	17.6	37.6	1.1	1.8	58.1	14.8	27.1	41.9	100.0
Denbighshire	13.1	60.1	0.2	1.0	74.4	19.1	6.5	15.6	100.0
Flintshire	24.9	63.9	1.2	0.6	90.6	8.0	1.4	9.4	100.0
Montgomeryshire	8.4	81.4	0.8	0.7	91.3	3.1	5.6	8.7	100.0
North Wales	15.8	58.9	0.8	1.1	76.6	12.2	11.2	23.4	100.0
Brecon, Radnor and Glamorganshire	6.8	67.1	4.0	1.6	79.5	14.0	6.5	20.5	100.0
Cardiganshire	6.9	58.2	3.1	6.2	74.4	18.8	6.8	25.6	100.0
Carmarthenshire... ..	4.8	70.7	0.4	4.4	80.3	14.9	4.8	19.7	100.0
Pembrokeshire	7.4	70.7	0.8	3.9	82.8	12.9	4.3	17.2	100.0
South Wales	6.2	67.7	1.6	4.2	79.7	15.0	5.3	20.3	100.0
Berkshire	18.9	40.9	18.6	6.5	84.9	14.1	1.0	15.1	100.0
Buckinghamshire... ..	13.6	39.5	12.5	9.9	75.5	23.0	1.5	24.5	100.0
Hampshire and Isle of Wight	27.2	27.0	20.1	4.5	78.8	16.2	5.0	21.2	100.0
Oxfordshire	6.7	50.8	14.4	8.4	80.3	14.7	5.0	19.7	100.0
Southern	19.8	35.7	17.5	6.5	79.5	16.8	3.7	20.5	100.0
Dorset	20.6	49.2	10.5	2.3	82.6	12.9	4.5	17.4	100.0
Somerset	20.0	49.2	6.2	2.3	77.7	19.0	3.3	22.3	100.0
Wiltshire	20.3	45.1	8.5	2.5	76.4	21.9	1.7	23.6	100.0
Mid Western	20.2	48.1	7.9	2.4	78.6	18.3	3.1	21.4	100.0
Devon	10.1	43.3	6.7	3.2	63.3	14.2	22.5	36.7	100.0
Cornwall	9.0	24.4	32.8	2.3	68.5	8.7	22.8	31.5	100.0
Far Western	9.6	35.8	17.0	2.9	65.3	12.0	22.7	34.7	100.0
Essex	16.3	65.6	2.9	7.8	92.6	4.7	2.7	7.4	100.0
Hertford, Surrey, London and Middlesex	24.3	34.1	12.2	9.3	79.9	16.4	3.7	20.1	100.0
Kent	27.6	22.7	21.1	6.8	78.2	15.7	6.1	21.8	100.0
East Sussex	24.5	30.9	19.5	15.5	90.3	7.7	1.9	9.6	100.0
West Sussex	18.6	29.9	23.4	11.1	83.0	13.4	3.6	17.0	100.0
South Eastern	22.9	35.3	16.1	10.2	84.5	11.9	3.6	15.5	100.0
Total England and Wales ...	19.2	51.1	6.2	3.3	79.8	14.5	5.7	20.2	100.0

* OTHERS include British White, Dexter, Kerry, Red Poll, South Devon and Welsh Black Dual Purpose breeds, and all beef type cows found in milking herds.

Source: M.M.B. Interim Cow Census 1960.

SIZE DISTRIBUTION BY COUNTIES OF THE NATIONAL DAIRY HERD 1960

COUNTY AND REGION	NUMBER OF HERDS OF						NUMBER OF COWS IN EACH HERD SIZE GROUP IN HERDS OF							
	Under 10 Cows	10—19 Cows	20—29 Cows	30—39 Cows	40—49 Cows	50 Cows and Over	Total Herds	Under 10 Cows	10—19 Cows	20—29 Cows	30—39 Cows	40—49 Cows	50 Cows and Over	Total Cows
Cumberland	392	1,247	756	503	224	249	3,371	2,752	18,528	18,127	17,095	9,625	16,182	82,309
Durham and Northumberland	656	1,247	461	264	141	98	2,867	4,392	17,410	10,930	9,171	6,091	7,151	55,145
Westmorland	115	756	391	114	99	99	1,574	758	11,088	9,562	4,006	4,222	6,791	36,427
Yorkshire E. Riding	568	642	205	79	28	51	1,573	3,523	9,026	4,780	2,670	1,226	3,055	24,280
Yorkshire N. Riding	1,437	2,017	663	181	72	117	4,487	9,382	28,273	15,222	5,991	3,182	7,337	69,387
Northern	3,168	5,909	2,476	1,141	564	614	13,872	20,807	84,325	58,621	38,933	24,346	40,516	267,548
	5,169	6,571	2,493	902	318	369	15,822	31,732	90,152	58,677	30,434	13,826	26,514	251,335
Cheshire	952	1,417	682	629	422	625	4,727	4,993	20,681	16,553	21,475	18,000	40,563	122,265
Lancashire	976	2,117	1,358	669	297	299	5,716	5,551	29,974	31,986	22,064	13,192	21,955	124,721
Yorkshire W. Riding	1,422	2,335	1,199	463	142	172	5,753	8,927	32,490	27,816	15,800	5,947	11,706	102,686
Derbyshire	683	1,324	845	344	163	292	3,651	3,817	18,599	19,624	11,576	7,282	18,895	79,793
Staffordshire	1,093	1,443	875	596	305	230	4,542	6,013	20,320	20,954	20,324	13,394	15,055	96,060
North Western	5,126	8,656	4,959	2,701	1,329	1,618	24,389	29,301	122,064	116,933	91,239	57,816	108,174	525,525
	8,077	10,656	5,372	2,507	1,246	1,380	29,238	47,267	149,056	127,387	84,260	54,264	91,336	553,572
Lincolnshire	707	611	274	26	25	90	1,733	4,203	8,312	6,564	950	1,146	6,586	27,761
Cambridge, Huntingdon, Isle of Ely, Peterborough	169	138	61	57	32	76	533	933	2,081	1,397	1,906	1,359	4,526	12,202
Norfolk	436	584	298	165	105	281	1,869	2,427	7,987	6,988	5,697	4,720	19,075	46,894
Suffolk	315	513	232	117	107	200	1,484	1,874	7,243	5,357	3,880	4,727	16,651	39,732
Eastern	1,627	1,846	865	365	269	647	5,619	9,437	25,623	20,306	12,433	11,952	46,838	126,589
	2,801	2,227	924	473	254	392	7,071	16,071	30,090	21,793	15,944	11,121	28,645	123,665
Bedfordshire	87	98	62	51	33	24	355	600	1,369	1,394	1,722	1,437	1,760	8,282
Leicester and Rutland	384	803	436	328	72	71	2,094	2,368	11,636	10,260	10,923	3,014	4,569	42,770
Northamptonshire	81	425	206	138	80	51	981	546	6,019	4,948	4,437	3,426	4,284	23,660
Nottinghamshire	261	484	264	125	50	62	1,246	1,661	6,902	6,196	4,258	2,242	4,652	25,911
Warwickshire	216	500	583	184	128	48	1,659	1,251	7,725	14,109	6,182	5,563	2,686	37,516
East Midland	1,029	2,310	1,551	826	363	256	6,335	6,426	33,651	36,907	27,522	15,682	17,951	138,139
	1,781	3,046	1,575	725	292	249	7,668	11,238	42,858	37,100	24,358	12,553	17,916	146,023
Gloucestershire	424	827	801	385	188	171	2,796	2,308	11,930	19,140	12,903	8,270	13,406	67,957
Herefordshire	238	481	253	162	26	26	1,186	1,420	6,980	6,259	5,468	1,050	1,696	22,873
Monmouthshire	217	602	363	83	37	18	1,320	1,440	8,217	8,509	2,785	1,044	1,528	23,523
Worcestershire	179	403	334	91	75	56	1,138	1,195	5,795	7,765	3,072	3,251	3,968	25,046
Shropshire	1,015	1,270	706	437	308	499	4,235	5,808	18,131	16,799	15,095	13,393	33,070	102,296
West Midland	2,073	3,583	2,457	1,158	634	770	10,675	12,171	51,053	58,472	39,323	27,492	53,184	241,695
	3,818	4,220	2,167	1,040	556	590	12,391	21,766	58,880	51,129	35,037	24,133	38,750	229,695

SIZE DISTRIBUTION BY COUNTIES OF THE NATIONAL DAIRY HERD 1960

COUNTY AND REGION		NUMBER OF HERDS OF						NUMBER OF COWS IN EACH HERD SIZE GROUP IN HERDS OF							
		Under 10 Cows	10—19 Cows	20—29 Cows	30—39 Cows	40—49 Cows	50 Cows and over	Total Herds	Under 10 Cows	10—19 Cows	20—29 Cows	30—39 Cows	40—49 Cows	50 Cows and over	Total Cows
Anglesey, Caernarvon and Merionethshire	...	1,896	1,383	213	32	12	3	3,539	11,280	18,146	4,821	1,074	544	303	36,168
Denbighshire	...	851	1,142	243	108	35	93	2,472	5,126	15,609	5,698	3,671	1,617	5,905	37,627
Flintshire	...	376	453	270	114	57	63	1,333	2,162	6,021	6,382	3,747	2,402	4,480	25,194
Montgomeryshire	...	478	628	199	133	66	51	1,555	2,801	8,806	4,476	4,639	2,785	2,861	26,368
North Wales	1955	3,601	3,606	925	387	170	210	8,899	21,369	48,582	21,377	13,131	7,348	13,549	125,356
		4,899	3,685	912	286	156	145	10,083	28,066	48,882	21,206	9,593	6,742	9,893	124,382
Brecon, Glamorgan and Radnorshire	...	612	1,140	399	106	55	29	2,341	4,041	15,766	9,237	3,478	2,335	727	35,584
Cardiganshire	...	1,191	1,186	413	77	20	15	2,902	6,492	16,279	9,655	2,473	815	1,050	36,764
Cardemarthenshire	...	1,543	2,247	1,028	221	71	31	5,141	8,144	31,620	24,520	7,368	3,149	1,590	76,391
Pembrokeshire	...	1,033	1,223	564	186	37	52	3,095	5,966	17,989	13,094	6,293	1,608	2,493	47,443
South Wales	1955	4,379	5,796	2,404	590	183	127	13,479	24,643	81,654	56,506	19,612	7,907	5,859	196,182
		5,864	6,371	1,950	438	82	42	14,747	32,770	87,947	45,165	14,334	3,550	3,167	186,933
Berkshire	...	81	230	193	137	101	174	916	537	3,367	4,778	4,574	4,437	11,053	28,746
Buckinghamshire	...	208	445	300	158	91	71	1,273	1,157	6,589	7,316	5,224	4,009	4,973	29,268
Hampshire and Isle of Wight	...	279	730	622	365	317	271	2,584	1,426	10,085	15,074	12,578	13,869	21,704	74,736
Oxfordshire	...	130	302	225	156	73	112	998	836	4,326	5,293	5,237	3,159	7,749	26,600
Southern	1955	698	1,707	1,340	816	582	628	5,771	3,956	24,367	32,461	27,613	25,474	45,479	159,350
		1,333	2,158	1,379	737	426	510	6,543	8,160	30,541	32,727	24,816	18,586	37,755	152,621
Dorset	...	314	633	519	442	253	491	2,652	1,751	9,294	12,655	14,805	11,031	34,752	84,288
Somerset	...	897	1,967	1,372	859	500	633	6,228	5,274	28,327	32,675	28,647	21,581	42,074	158,578
Wiltshire	...	213	640	670	337	329	620	2,809	819	9,494	16,148	11,771	14,300	43,255	95,787
Mid-Western	1955	1,424	3,240	2,561	1,638	1,082	1,744	11,689	7,844	47,115	61,478	55,223	46,912	120,081	338,653
		1,321	3,986	2,587	1,561	956	1,217	12,628	14,036	56,900	61,688	52,596	41,584	83,952	310,756
Devon	...	1,841	4,079	2,049	546	131	149	8,795	12,338	57,333	47,667	18,184	5,535	9,734	150,791
Cornwall	...	2,389	3,254	997	294	72	61	7,067	13,974	45,519	23,100	9,587	3,138	3,755	99,073
Far Western	1955	4,230	7,333	3,046	840	203	210	15,862	26,312	102,852	70,767	27,711	8,673	13,489	249,864
		7,694	7,533	1,977	514	133	87	17,938	45,249	101,508	45,728	17,029	5,720	7,423	222,657
Essex	...	108	239	262	132	185	95	1,021	662	3,632	6,463	4,394	8,298	5,957	29,406
Hertford, Surrey, London and Middlesex,	...	168	337	312	232	233	176	1,458	884	5,021	7,558	7,822	10,014	11,229	42,528
Kent	...	167	447	196	196	114	239	1,359	935	6,264	4,677	6,545	5,131	16,206	39,758
E. Sussex	...	116	584	439	206	68	164	1,577	734	8,444	10,760	7,179	3,060	12,821	42,998
W. Sussex	...	97	240	232	149	106	137	961	540	3,639	5,676	5,267	4,606	9,537	29,265
South Eastern	1955	656	1,847	1,441	915	706	811	6,376	3,755	27,000	35,134	31,207	31,109	55,750	183,955
		1,353	2,307	1,571	919	552	568	7,270	8,243	32,949	37,554	31,153	24,005	40,067	173,971
England and Wales	1955	28,011	45,833	24,025	11,377	6,085	7,635	122,966	166,021	648,286	568,963	384,007	264,710	520,870	2,552,857
		45,110	52,760	22,907	10,102	4,971	5,549	141,399	264,599	729,763	540,192	339,554	216,084	385,418	2,475,610

SOURCE: Milk Marketing Board Interim Cow Census 1960 and Cow Census 1955.

NOTE: The comparative statistics for 1955 are given in italics.

METHOD OF MATING (NATURAL OR A.I.) BY REGIONS AND SIZE OF HERD—NATIONAL DAIRY HERD, 1960

REGION (method of mating)	HERDS BY HERD SIZE GROUP						
	under 10 cows	10—19 cows	20—29 cows	30—39 cows	40—49 cows	over 50 cows	Total Herds
Percentages							
Natural Mating only	10.5	18.0	30.9	41.1	43.0	51.5	23.0
A.I. only	65.8	61.9	39.0	25.4	11.7	14.0	51.6
Natural Mating and A.I.	9.1	13.8	24.5	28.1	43.0	24.8	17.5
No bulls used	0.7	—	—	—	—	—	0.1
Unspecified	13.9	6.3	5.6	5.4	2.3	9.7	7.8
Northern	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Natural Mating only	4.6	8.8	17.6	21.1	23.9	30.6	13.3
A.I. only	76.5	73.9	55.9	37.4	31.5	19.4	60.8
Natural Mating and A.I.	2.6	7.5	18.3	33.8	37.1	46.3	15.8
No bulls used	0.5	0.9	0.7	0.2	—	—	0.6
Unspecified	15.8	8.9	7.5	7.5	7.5	3.7	9.5
North Western	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Natural Mating only	5.1	7.8	16.7	21.7	32.1	47.7	15.0
A.I. only	77.6	81.0	53.9	49.4	25.1	10.1	62.9
Natural Mating and A.I.	4.1	4.5	21.0	28.9	42.8	39.6	14.4
No bulls used	—	—	—	—	—	—	—
Unspecified	13.2	6.7	8.4	—	—	2.6	7.7
Eastern	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Natural Mating only	2.7	10.1	14.6	20.5	37.8	29.2	13.7
A.I. only	72.2	72.9	54.7	44.0	30.9	14.5	59.8
Natural Mating and A.I.	13.4	8.4	24.3	29.6	31.3	53.0	19.0
No bulls used	—	—	—	—	—	—	—
Unspecified	11.7	8.6	6.4	5.9	—	3.3	7.5
East Midland	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Natural Mating only	3.5	4.8	12.5	22.8	25.6	22.6	10.8
A.I. only	73.7	81.8	67.6	41.6	19.1	19.4	64.4
Natural Mating and A.I.	3.6	5.9	15.3	31.4	44.5	54.0	16.1
No bulls used	0.5	—	—	—	—	—	0.1
Unspecified	18.7	7.5	4.6	4.2	10.8	4.0	8.6
West Midland	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Natural Mating only	7.1	13.4	25.4	26.9	32.7	48.0	13.8
A.I. only	72.1	68.3	45.6	36.3	36.7	6.0	64.0
Natural Mating and A.I.	3.1	8.2	21.2	31.9	26.5	36.9	9.6
No bulls used	—	—	—	—	—	—	—
Unspecified	17.7	10.1	7.8	4.9	4.1	9.1	12.6
North Wales	100.0	100.0	100.0	100.0	100.0	100.0	100.0

METHOD OF MATING (NATURAL OR A.I.) BY REGIONS AND SIZE OF HERD—NATIONAL DAIRY HERD 1960

REGION (method of mating)	HERDS BY HERD SIZE GROUP						
	under 10 cows	10—19 cows	20—29 cows	30—39 cows	40—49 cows	over 50 cows	Total Herds
	Percentages						
Natural Mating only	1.0	2.8	6.1	12.0	22.8	8.5	3.5
A.I. only	79.1	80.4	72.3	60.1	45.5	45.5	76.8
Natural Mating and A.I.	1.5	2.6	14.3	25.1	31.7	28.8	6.0
No bulls used	—	—	—	—	—	—	—
Unspecified	18.4	14.2	7.3	2.8	—	17.2	13.7
South Wales	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Natural Mating only	2.1	14.1	12.0	15.3	27.1	32.8	15.7
A.I. only	76.2	71.5	62.3	52.7	34.0	12.2	57.0
Natural Mating and A.I.	2.7	8.1	22.2	25.9	35.5	55.0	21.1
No bulls used	3.0	—	—	—	—	—	0.4
Unspecified	16.0	6.3	3.5	6.1	3.4	—	5.8
Southern	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Natural Mating only	8.5	6.7	13.8	20.1	35.3	24.2	15.6
A.I. only	74.4	81.8	67.4	55.5	42.5	24.2	61.9
Natural Mating and A.I.	5.5	2.6	12.1	21.3	19.2	51.6	16.5
No bulls used	—	—	—	—	—	—	—
Unspecified	11.6	8.9	6.7	3.1	3.0	—	6.0
Mid Western	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Natural Mating only	2.9	5.9	16.8	23.8	30.1	14.3	8.6
A.I. only	75.2	80.8	64.4	52.5	33.7	20.1	73.2
Natural Mating and A.I.	2.2	3.4	11.7	17.7	31.7	55.3	6.5
No bulls used	1.0	—	0.3	—	—	—	0.3
Unspecified	18.7	9.9	6.8	6.0	4.5	10.3	11.4
Far Western	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Natural Mating only	3.7	8.6	17.2	20.4	24.2	24.6	15.5
A.I. only	75.5	75.2	63.5	43.3	35.3	12.6	55.6
Natural Mating and A.I.	5.4	9.0	16.9	35.4	38.6	62.8	24.3
No bulls used	1.8	0.4	—	—	—	—	0.4
Unspecified	13.6	6.8	2.4	0.9	1.9	—	4.2
South Eastern	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Natural Mating only	4.8	8.9	16.5	22.5	29.8	30.6	13.1
A.I. only	74.5	75.2	59.6	43.9	31.3	17.9	63.4
Natural Mating and A.I.	3.9	6.6	17.5	28.6	34.5	48.4	14.1
No bulls used	0.5	0.2	0.2	0.1	—	—	0.2
Unspecified	16.3	9.1	6.2	4.9	4.4	3.1	9.2
England and Wales	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Milk Marketing Board. Interim Cow Census 1960.

BEEF FROM THE DAIRY HERD

(Method of Disposal of 'Beef' Calves)

Region	Method of Disposal *								Total	No Answer	Grand Total
	a	b	c	a&b	a&c	b&c	abc	None			
	Number of Herds and Percent										
REGION 1: No. Northern %	2750 22.6	3360 27.6	2180 17.9	1260 10.4	250 2.1	650 5.3	590 4.8	1130 9.3	12170 100.0	1700	13870
REGION 2: No. North Western %	8290 41.7	2070 10.4	2220 11.2	1410 7.1	940 4.7	480 2.4	890 4.5	3590 18.0	19890 100.0	4500	24390
REGION 3: No. Eastern %	1340 26.6	1020 20.3	1140 22.7	300 6.0	140 2.8	310 6.1	150 3.0	630 12.5	5030 100.0	590	5620
REGION 4: No. East Midland %	1250 22.4	1080 19.3	1440 25.8	420 7.5	220 3.9	240 4.3	310 5.5	630 11.3	5590 100.0	740	6330
REGION 5: No. West Midland %	3640 39.3	1540 16.6	860 9.3	1020 11.0	300 3.2	350 3.8	350 3.8	1200 13.0	9260 100.0	1410	10670
REGION 6: No. North Wales %	2040 27.3	1800 24.1	1100 14.7	640 8.6	130 1.7	390 5.2	270 3.6	1110 14.8	7480 100.0	1420	8900
REGION 7: No. South Wales %	4320 36.9	1540 13.1	910 7.8	1370 11.7	530 4.5	290 2.5	710 6.1	2040 17.4	11710 100.0	1770	13480
REGION 8: No. Southern %	1470 31.0	520 10.9	790 16.6	260 5.5	200 4.2	240 5.1	210 4.4	1060 22.3	4750 100.0	1020	5770
REGION 9: No. Mid Western %	4450 44.4	720 7.2	910 9.1	830 8.3	550 5.5	210 2.1	380 3.8	1960 19.6	10010 100.0	1680	11690
REGION 10: No. Far Western %	3830 28.5	1970 14.7	2950 21.9	770 5.7	450 3.3	550 4.1	530 3.9	2400 17.9	13450 100.0	2410	15860
REGION 11: No. South Eastern %	1930 36.1	610 11.4	940 17.5	310 5.8	200 3.7	190 3.5	70 1.3	1110 20.7	5360 100.0	1020	6380
England and Wales No. %	35310 33.7	16230 15.5	15440 14.8	8590 8.2	3910 3.7	3900 3.7	4460 4.3	16860 16.1	104700 100.0	18260	122960

- * (a) Calves sold within two months for rearing for beef.
 (b) Calves reared to yearling stage for beef.
 (c) Calves reared to slaughtering stage for beef.

DISTRIBUTION OF HERDS ACCORDING TO SIZE OF FARM

REGION		Proportion of Herds in the following farm size groups								All Farm Sizes	
		Under 10 Acres	10—24 Acres	25—49 Acres	50—99 Acres	100—149 Acres	150—199 Acres	200—299 Acres	300 Acres and Over		
		%	%	%	%	%	%	%	%	%	
Northern	...	1.1	6.1	16.5	32.9	21.5	10.3	8.0	3.6	100.0	
North Western	...	3.8	12.5	25.9	31.7	14.6	5.8	4.3	1.4	100.0	
Eastern	...	1.6	5.8	13.7	27.5	17.9	7.3	10.4	15.8	100.0	
East Midland	...	—	2.7	12.1	29.1	18.6	13.7	16.1	7.7	100.0	
West Midland	...	3.9	12.0	20.2	24.9	18.1	6.7	7.9	6.3	100.0	
North Wales	...	5.7	16.6	29.2	29.0	12.2	4.8	2.0	1.1	100.0	
South Wales	...	5.7	16.5	23.6	32.7	13.7	4.3	3.2	0.3	100.0	
Southern	...	1.4	7.8	15.9	23.9	17.9	7.8	10.1	15.2	100.0	
Mid Western	...	3.2	7.6	19.4	30.3	14.2	8.6	8.7	8.0	100.0	
Far Western	...	3.8	13.4	23.8	29.9	15.2	7.0	4.9	2.0	100.0	
South Eastern	...	1.2	6.6	15.0	27.1	16.5	7.0	12.6	14.0	100.0	
England and Wales	...	3.3	10.7	21.2	29.9	16.0	7.2	6.8	4.9	100.0	

DISTRIBUTION OF COWS ACCORDING TO SIZE OF FARM

Proportion of Cows in the above farm size groups											
		%	%	%	%	%	%	%	%	%	%
Northern	...	0.3	2.3	9.1	27.5	23.7	13.4	13.5	10.2	100.0	100.0
North Western	...	0.8	5.1	17.3	30.3	20.8	11.0	9.8	4.9	100.0	100.0
Eastern	...	0.4	2.0	5.7	16.8	14.8	6.6	16.0	37.7	100.0	100.0
East Midland	...	—	1.1	5.9	20.3	19.3	15.4	20.7	17.3	100.0	100.0
West Midland	...	0.7	4.1	11.7	21.6	21.5	18.9	14.4	17.1	100.0	100.0
North Wales	...	1.6	7.2	22.3	30.3	18.5	11.7	5.4	3.0	100.0	100.0
South Wales	...	1.2	7.0	18.2	37.2	20.6	7.9	7.0	0.9	100.0	100.0
Southern	...	0.3	2.3	8.6	18.8	17.4	8.6	13.0	31.0	100.0	100.0
Mid Western	...	0.4	2.3	10.1	24.2	15.9	13.1	15.5	18.5	100.0	100.0
Far Western	...	1.1	6.6	18.0	29.7	19.6	10.1	9.3	5.6	100.0	100.0
South Eastern	...	0.3	2.1	7.3	20.3	16.1	8.3	18.2	27.4	100.0	100.0
England and Wales	...	0.7	4.0	12.9	26.2	19.3	10.7	12.6	13.6	100.0	100.0

NOTE: These percentages were calculated from 109,802 herd returns and 2,293,679 cow returns in the July 1960 Interim Cow Census.
SOURCE: Milk Marketing Board, Interim Cow Census 1960

DENSITY OF STOCKING ON DAIRY FARMS

(Number of cows per 100 acres according to size of farm)

Region	Farm Acreage Groups						
	Under 50 acres	50—99 acres	100—149 acres	150—199 acres	200—299 acres	300 acres and over	All Farms
← Average number of cows →							
Northern	30.3	22.8	17.6	14.9	13.7	13.7	17.9
North Western	41.9	29.6	25.6	24.3	21.2	18.2	28.0
Eastern	29.5	19.3	15.6	12.1	14.8	10.1	13.4
East Midland	30.6	21.1	18.6	14.8	12.0	11.0	15.2
West Midland	28.6	27.4	22.5	17.6	18.1	15.0	21.7
North Wales	31.9	21.8	17.9	20.1	16.0	10.0	21.7
South Wales	32.0	24.2	18.7	16.1	14.0	11.6	22.1
Southern	42.0	30.4	22.3	17.7	15.1	11.2	17.3
Mid-Western	42.4	32.8	27.1	25.7	22.2	13.3	23.6
Far-Western	36.5	22.4	17.1	13.4	12.7	10.0	19.2
South Eastern	41.8	28.9	23.1	20.1	17.2	11.9	18.5
England and Wales	36.9	25.9	20.9	18.3	16.4	12.3	20.5

SOURCE: Milk Marketing Board Interim Cow Census, 1960.



Fig. 21. Density of stocking, by area.

NUMBER OF BULL LICENCES ISSUED—1941/2, 1951/52, and 1960/61

Regions		1941/42				1951/52				1960/61			
		Dairy	Dual Purpose	Beef	Total	Dairy	Dual Purpose	Beef	Total	Dairy	Dual Purpose	Beef	Total
Northern	No. %	788 9.7	6,865 84.9	438 5.4	8,091 100.0	2,310 41.0	2,917 51.8	404 7.2	5,631 100.0	1,633 53.4	745 24.6	681 22.0	3,059 100.0
North Western	No. %	1,636 32.7	3,244 64.9	128 2.4	5,000 100.0	1,910 73.4	663 25.6	30 1.0	2,603 100.0	2,540 83.9	317 10.5	171 5.6	3,028 100.0
Eastern	No. %	750 31.7	799 33.8	814 34.5	2,363 100.0	786 46.3	333 19.6	578 34.1	1,697 100.0	532 51.0	89 8.5	423 40.5	1,044 100.0
East Midland	No. %	369 19.6	600 31.9	912 48.5	1,881 100.0	669 45.9	180 12.4	608 41.7	1,457 100.0	516 56.9	84 9.3	307 33.8	907 100.0
West Midland	No. %	815 25.9	1,115 35.6	1,214 38.5	3,144 100.0	944 39.6	316 13.2	1,126 47.2	2,386 100.0	635 32.5	85 4.4	1,232 63.1	1,952 100.0
North Wales	No. %	201 10.3	1,459 74.8	290 14.9	1,950 100.0	621 46.7	566 42.5	144 10.8	1,331 100.0	530 53.9	171 17.4	282 28.7	983 100.0
South Wales	No. %	349 15.5	1,367 60.7	537 23.8	2,253 100.0	488 45.6	315 29.4	267 25.0	1,070 100.0	263 31.2	76 9.0	504 59.8	843 100.0
Southern	No. %	857 32.5	1,596 60.5	183 7.0	2,636 100.0	1,101 58.9	651 34.8	117 6.3	1,869 100.0	505 58.2	136 15.7	226 26.1	867 100.0
Mid Western	No. %	951 22.9	2,706 65.3	493 11.8	4,150 100.0	1,364 61.9	691 31.5	148 6.6	2,203 100.0	746 66.5	161 14.5	214 19.0	1,121 100.0
Far Western	No. %	234 11.1	1,010 48.2	863 40.7	2,107 100.0	421 40.5	334 32.2	283 27.3	1,038 100.0	314 45.0	177 25.4	206 29.6	697 100.0
South Eastern	No. %	1,331 44.6	1,366 45.5	306 9.9	2,981 100.0	1,560 67.8	481 20.9	260 11.3	2,301 100.0	767 61.6	115 9.3	364 29.1	1,246 100.0
England and Wales	No. %	8,281 22.7	22,105 60.5	6,170 16.8	36,556 100.0	12,174 51.6	7,447 31.6	3,965 16.8	23,586 100.0	8,980 57.0	2,167 13.8	4,603 29.2	15,747 100.0

NOTES—1. Dairy = Ayrshire, Friesian, Guernsey, Jersey (and for 1960/61 figures—British Canadian Holstein Friesian).

Dual Purpose = British White, Dexter, Kerry, Red Poll, Shorthorn, South Devon, Welsh Black (and for 1960/61 figures—the Northern Dairy Shorthorn).

Beef = Aberdeen Angus, Devon, Galloway, Hereford, Lincoln Red, Sussex, Highland and Longhorn.

2. No regional distribution is available for pre-war years, but for 1935/36 for England and Wales as a whole the distribution was as follows:—14% dairy, 73% dual purpose and 13% beef.

3. Source—Ministry of Agriculture, Fisheries and Food.

REGISTRATIONS IN BREED SOCIETY HERD BOOKS (1935-1960)

Year	Ayrshire (1877/1878*)			Friesian (1909/1912*)			Guernsey (1884/1884*)			Jersey (1878/1880*)			Shorthorn (1875/1872*)		
	Pedigree		Total	Pedigree		Total	Pedigree		Total	Pedigree		Total	Pedigree		Total
	Male	Female		Male	Female		Male	Female		Male	Female		Male	Female	
1935	1,243	6,926	8,169	1,119	5,884	7,003	779	3,482	4,261	583	3,499	4,082	6,509	10,068	16,577
1940	2,031	11,122	13,153	1,629	7,915	9,544	553	3,082	3,635	373	3,436	3,809	5,795	10,095	15,890
1945	5,131	25,613	30,744	2,265	15,980	18,245	1,161	4,419	5,580	745	4,857	5,602	8,388	13,816	22,204
1950	7,184	49,974	57,158	5,858	33,477	39,335	1,704	9,315	11,019	1,100	13,050	14,150	5,932	19,260	25,192
1955	4,860	53,363	58,363	4,750	52,400	57,150	728	12,342	13,070	650	18,700	19,350	3,689	19,333	23,022
1956	3,808	51,230	55,038	4,653	58,728	63,381	624	12,195	12,819	600	19,150	19,750	3,435	19,350	22,785
1957	3,971	49,656	53,627	4,499	60,188	64,687	703	11,855	12,558	850	19,250	20,100	2,961	18,958	21,919
1958	3,575	45,789	49,364	4,092	60,082	64,174	599	10,419	11,018	680	17,700	18,380	3,086	17,644	20,730
1959	3,885	45,444	49,329	4,791	64,360	69,150	454	9,934	10,388	520	17,800	18,320	2,438	16,701	19,139
1960	3,203	45,301	48,504	5,250	69,150	74,400	437	9,510	9,947	499	17,199	17,698	1,212	13,914	15,126

*Date Society Formed/Herd Book Started

NOTES.—1. In addition the following entries in Grading Registers were accepted in 1960.

Ayrshire 1,534; Friesian 14,750; Guernsey 467; Jersey 69; Shorthorn 4,918.

2. The latest figures for the remaining breeds are as follows:—

Breed	Year	Male	Female	Total	Grading-Up
Red Poll	1960	166	4,555	4,721	393
South Devon	1958	188	1,246	1,434	1,089
Welsh Black	1960	153	975	1,128	415
Lincoln Red	1958	432	1,551	1,983	484
Devon	1960	218	1,711	1,929	—
Dexter	1960	29	119	148	—
British White	1959	18	134	152	18
Kerry	1959	—	55	55	—

Source: Cattle Breed Herd Books



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